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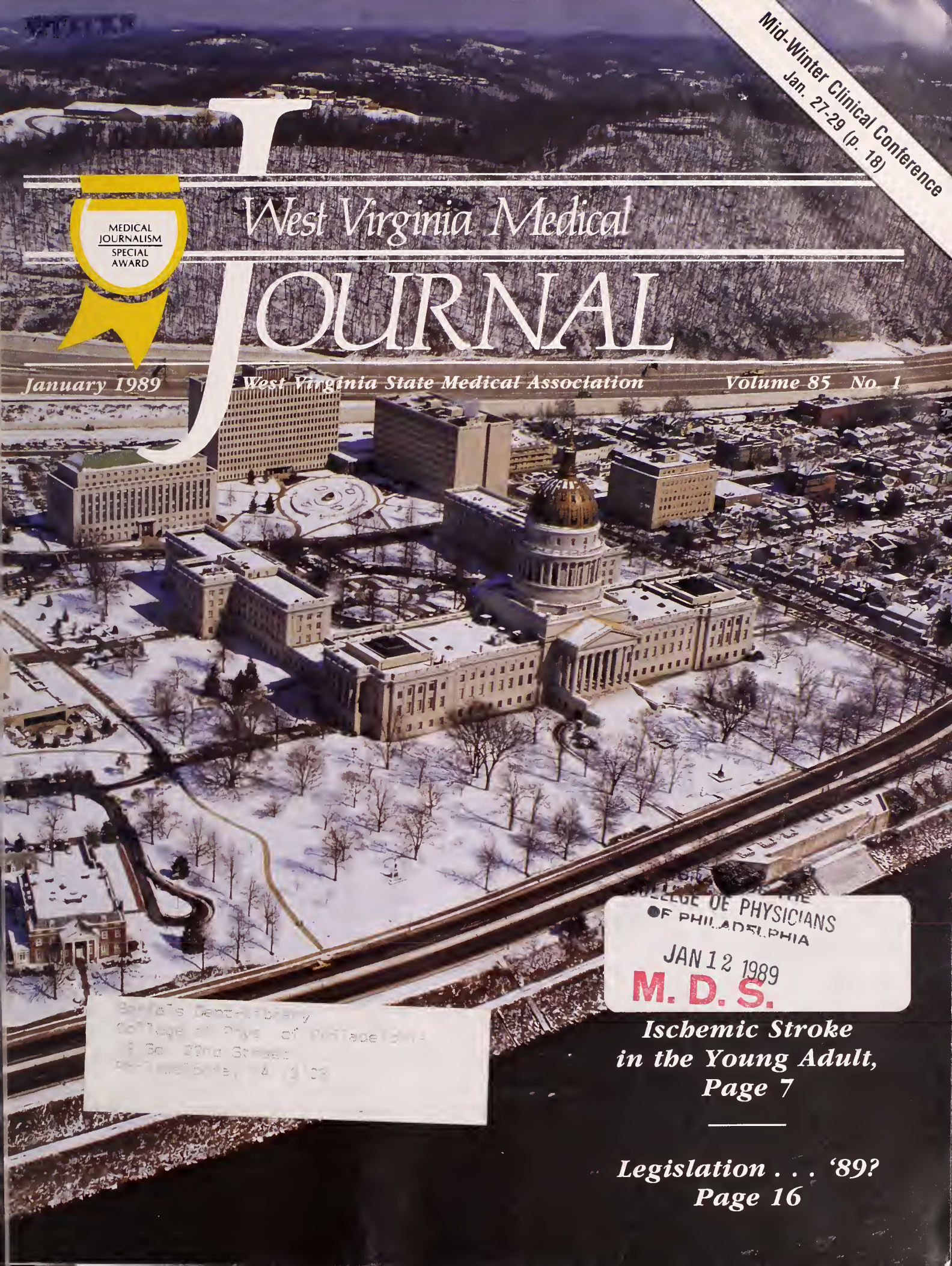
MEDICAL JOURNALISM SPECIAL AWARD

West Virginia Medical JOURNAL

January 1989 The West Virginia State Medical Association Volume 85 No. 1



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Ischemic Stroke in the Young Adult, Page 7

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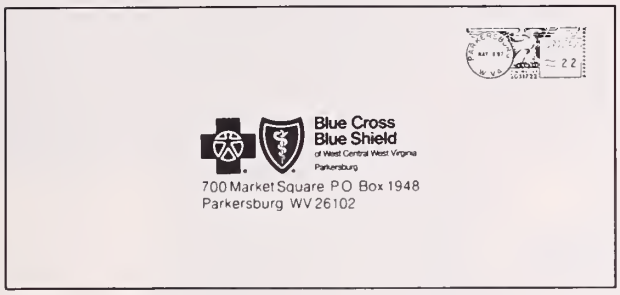

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA
PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

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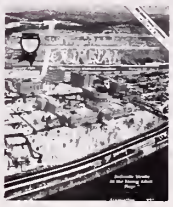

Front Cover

West Virginia's capitol and other state office buildings on the Kanawha River in Charleston's East End. Photo courtesy of *Wonderful West Virginia* Magazine. Arnout Hyde, Jr., photographer.

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Ischemic Cerebrovascular Disease in the Young Adult

Emergence of Oral Contraceptive Use and Pregnancy as the Major Risk Factors in the 1980s

JOHN F. BRICK, M.D.
JACK E. RIGGS, M.D.
Department of Neurology, West Virginia University School of Medicine

Although oral contraceptives and pregnancy are recognized risk factors for stroke, epidemiological studies in young adults have not demonstrated these as the major risk factor of ischemic stroke in this age group. Our experience suggests that pregnancy and oral contraceptives have emerged as the major current risk factors for ischemic stroke in young adults.

Introduction

Ischemic cerebrovascular disease occurs primarily in the older segment of the population. About one per cent of strokes occur in patients younger than the age of 35 (1). Although previous studies have implicated cardiogenic embolism, atherosclerosis, and hypertension as major risk factors, we suggest that a significant change in the epidemiology of ischemic stroke in young adults has occurred.

Methods

The records of all patients with stroke, 15-30 years of age, admitted to the West Virginia University Hospital or seen in the outpatient department between 1982 and 1984 were reviewed. All patients (N=28) were examined by a staff neurologist or neurosurgeon and underwent computerized tomography of the brain. Cerebral aniography (N=17) and echocardiography (N=18) were carried out when clinically indicated. In most cases, it was not possible from review of the medical record to determine which preparation of oral contraceptive the patient was taking. Likewise, the records did not contain enough information to assess the prevalence of migraine headaches and cigarette smoking in these patients.

Results

Twenty-eight patients aged 15-30 were identified (Table). Of these, 71 per cent (N=20) experienced ischemic infarction. In the ischemic group, 30 per cent (N=6) were pregnant, 35 per cent (N=7) were taking oral contraceptives, 25 per cent (N=5) had valvular heart disease or endocarditis (two subacute bacterial endocarditis [not drug abuses], two mitral valve prolapse, one tetralogy of Fallot), one patient had hypertension, and in a single patient no risk factor was identified. In no patient did RPR, ESR, or ANA suggest a vasculitic process. The female (N=17)-to-male (N=3) ratio in the ischemic group was 5.6/1. Thus, 65 per cent of the patients in the ischemic infarction group were pregnant or taking oral contraceptives. Diabetes was conspicuously absent as an identified risk factor.

Discussion

Ischemic stroke in young adults has been attributed to a wide variety of causes including cardiogenic embolism (2), coagulopathy (3), hypertension (4), drug abuse (5), migraine (6), atherosclerotic vascular disease (7), pregnancy (8), and oral contraceptives (9). In our series, the most prevalent risk factors were oral contraceptives (35 per cent) and pregnancy (30 per cent). Almost two thirds of ischemic strokes in our group of young adults occurred in women while there was some modification in their reproductive hormonal status. The effects of gestational steroids upon coagulation pathways and vessel walls have been described. Antithrombin III activity, the major plasma inhibitor of thrombin, is decreased during oral contraceptive use (10). Intimal proliferation with and without associated thrombosis has been reported in women taking oral contraceptives (11). The obvious sexual bias in these factors in the pathogenesis of ischemic stroke in young adults likely accounts for the marked female-to-male proponderance (5.6 females/one male) present in our study.

Previous reports have implicated cardiogenic embolism or atherosclerotic vascular disease as the major risk factors for ischemic stroke on young adults (4, 7, 12-15). However, these studies included patients up to age 45 years. In these studies the female/male ratio (when reported) ranged from 1/1 to 2.5/1 (4, 7, 13, 15). The female/male ratio was much higher in our study (5.6/1) than the 1.7/1 ratio recently reported by Bogousslavsky and Regli (15). In this report (studying an identical age group) mitral valve prolapse (MVP) and arterial dissection accounted for 51 per cent of infarcts (15). This is in contrast to our study in which only 11 per cent of studied patients had MVP. Furthermore, MVP was found in only two of the 15 women who had echocardiography. Thus, the prevalence of MVP in young women with ischemic infarction in our study was not greater than the reported general prevalence (16), and suggests that MVP was not a significant factor in our series.

The striking female preponderance in our series serves to validate our conclusion that

TABLE

Probable Causes of Stroke

Case	*Age/Sex*	*CT*	*2-D Echo*+	*Arteriogram*	*Comments*
1.	25/F	Cerebellar infarction	Negative	Negative	Pregnant, acute onset ataxia, diplopia
2.	28/F	Frontal infarction	Negative	Negative	Pregnant
3.	29/F	Frontal infarction	Negative	———	Pregnant
4.	24/F	Frontotemporal infarction	Negative	Occlusion middle cerebral artery	Pregnant
5.	30/F	Parietal infarction	Negative	———	Pregnant
6.	22/F	Parietal infarction	Negative	———	Pregnant
7.	29/F	+ +SAH	———	Cerebral aneurysm	———
8.	22/F	SAH	———	Cerebral aneurysm	———
9.	26/M	Intracerebral hemorrhage	———	Negative	———
10.	30/M	SAH	———	Negative	Acute onset headache bloody CSF
11.	17/M	SAH	———	Cerebral aneurysm	———
12.	19/M	SAH	———	Cerebral aneurysm	Acute 3rd nerve palsy
13.	28/F	SAH	———	Cerebral aneurysm	———
14.	22/F	Frontal infarct	+ + +MVP	Multiple occluded Vessels	———
15.	17/M	Temporal infarct	Tetralogy of Fallot	———	———
16.	19/F	Frontal infarct	MVP	Negative	———
17.	22/F	Parietal infarct	Vegetations mitral valve	———	Positive blood cultures
18.	17/M	Frontal and occipital infarcts	Aortic stenosis	———	Positive blood cultures
19.	24/F	Frontal infarct	Negative	———	+ + + +OC
20.	20/F	Temporal Infarct	Negative	Occlusion middle cerebral artery	OC
21.	24/F	Occipital infarct	———	Negative	OC
22.	20/F	Left hemisphere infarct	Negative	———	OC
23.	22/F	Parietal infarct	Negative	———	OC
24.	24/F	Frontal infarct	Negative	———	OC
25.	23/F	Frontoparietal infarct	Negative	Occlusion internal carotid artery	OC
26.	25/F	Frontal	———	———	Renal failure hypertension
27.	19/F	Cerebellar hemorrhage	———	Cerebellar AVM	
28.	29/F	Temporal infarct	Negative	Occlusion internal carotid artery	No risk factor identified

+Two-Dimensional Echocardiography
+ +Subarachnoid Hemorrhage
+ + +Mitral Valve Prolapse
+ + + +Oral Contraceptives

factors with a strong female sexual bias were the major risk factors for ischemic stroke in young adults. Factors such as heart disease, migraine, cigarette smoking, and hypertension would not be expected to show such female predominance. The rural nature of our referral population likely accounts for absence of drug-related stroke. Our results suggest a significant change in the epidemiology of ischemic stroke in young adults, and likely reflects improved management of hypertension and the declining incidence of cardiac valvular disease in the general population.

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Charleston Area Medical Center Experience

Adenocarcinoma of Unknown Primary Site

STEVEN J. JUBELIRER, M.D.
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A retrospective review of 108 patients with adenocarcinoma of unknown primary site (ACUPS) seen at Charleston Area Medical Center from 1979 to 1987 was performed. The liver and bones were the most common presenting sites of metastases. Only three patients had their primary site found after extensive radiologic and endoscopic workup. The pancreas and biliary tract were the most frequent laparotomy or autopsy-proven primary sites.

Four of the 27 patients treated with chemotherapy responded (14.8 per cent). Eleven of 12 patients who survived for longer than 12 months had predominantly localized disease which permitted local therapy (i.e. surgery and/or radiotherapy). The median survival of the entire cohort was four months. The search for the primary site should include investigation of the patients' signs and symptoms, and limited screening tests.

Adenocarcinoma from an unknown primary site (ACUPS) is a common problem encountered by oncologists. The incidence of ACUPS in the literature ranges between 0.5 per cent (1,2) and seven per cent (3,4) of the cancer population but can be as high as 16 per cent in selected groups of patients (5).

This article reviews the experience at Charleston Area Medical Center (CAMC) with ACUPS from 1979 through 1986. The clinical presentation, metastatic evaluation, response to treatment, survival, and autopsy findings are discussed.

Materials and Methods

From January, 1979, to January, 1987, 108 new patients with ACUPS were identified by the CAMC tumor registry. They represented one per cent of the total number of new cancer cases diagnosed during this period.

In the current study, the concept of ACUPS refers to cases in which at the time of diagnosis and primary treatment (defined as that treatment received within four months of diagnosis) the origin remained unknown to the physician. This includes cases in which: 1) no primary could be found on an initial evaluation which included a thorough history, physical examination (including pelvic and rectal examination), complete blood count, SMAC-20, urinalysis, stool for occult blood, and chest x-ray, 2) the primary site was strongly suspected but not proven, and 3) a primary site was subsequently identified at surgery or autopsy.

> ***"... a primary tumor which is too small to be detected clinically or radiologically is the most probable explanation for failure to detect a primary anatomic site ..."***

All pathologic material was examined at CAMC. Initial diagnosis was made on the basis of results from light microscopy.

Survival was calculated from the date of diagnosis. In those patients who received chemotherapy, criteria for response were as follows: a complete response (CR) was defined as disappearance of all tumor for at least two months, and a partial response (PR) was defined as more than 50-per cent reduction in the sum of the products of perpendicular tumor diameters for at least two months without progression or new appearance at other sites. All others were considered non-responders.

TABLE 1

Site	*Number of Patients*
Liver	42
Bone	30
Lung	18
Brain	18
Lymph node	12
Bone marrow	10

RESULTS

Clinical Presentation

Of the 108 patients analyzed, 55 were female and 53 male. The median age was 72.3 years, with an age range from 22 to 89 years.

The presenting sites of metastatic disease are shown in Table 1. The most common site of metastases was the liver, followed by bone. Fifty patients presented with a single metastatic site, and 58 presented with two or more sites of metastatic disease.

Diagnosis of Primary Site

The diagnostic evaluation of these patients is shown in Table 2. The primary site was not found in any patient by the following tests: UGI series, barium enema, colonoscopy, sigmoidoscopy, intravenous pyelogram (IVP), mammography, or bronchoscopy. A chest x-ray which was performed in all patients was normal in 90 and abnormal in 18. Of these 18 patients, 10 had a pleural effusion, five had nodular lesions, and three had an extrapleural mass.

An abdominal CT scan was performed in 78 patients. Among these a primary site was found in only three. Found in 31 of these patients were non-specific abnormalities including liver metastases in 18, retroperitoneal adenopathy in eight, an abdominal mass in four, paravertebral mass in two, and ascites in one.

An exploratory laparotomy was performed in 33 patients. Among these a primary site was found

TABLE 2

Diagnostic Tests in the Workup of Patients With ACUPS at CAMC, 1979-87

Test	*Number of Patients Undergoing Test*	*Number of Patients in Whom A Primary Site Was Found*
UGI SERIES	91	0
ENDOSCOPY	9	0
BARIUM ENEMA	90	0
COLONOSCOPY	9	0
SIGMOIDOSCOPY	21	0
INTRAVENOUS PYELOGRAM (IVP)	62	0
BRONCHOSCOPY	40	0
ABDOMINAL CT SCAN	78	3: 1 pancreas 1 adrenal 1 ovarian
EXPLORATORY LAPAROTOMY	33	8: 2 pancreas, head 2 stomach 1 pancreas, tail 1 pancreas, body 1 uterus 1 gall bladder
MAMMOGRAPHY	32	0

Note: The tests do not include serologic tumor markers, such as carcino-embryonic antigen (CEA), acid phosphatase or alpha feto-protein.

in eight. In the remaining 25 patients, extensive peritoneal carcinomatosis was found in 13, liver metastases in seven, and no abnormalities in five.

An autopsy was performed in six patients. Among these a primary site was identified in five. The primary tumors detected were as follows: biliary tract, two; body of pancreas, one; lung one, and fallopian tube, one.

Treatment

There were 27 patients who were treated initially with chemotherapy: Eight received 5-fluorouracil (5-FU), adriamycin, and mitomycin-C as initial therapy. Other chemotherapeutic regimens used were: 5-FU alone, seven; cytoxan, adriamycin and 5-FU (CAF), four; cytoxan, adriamycin and cisplatin (CAP), three; Velban, mitomycin-C and cisplatin, two; methotrexate, adriamycin, cytoxan, and CCNU (MACC), two, and cytoxan, methotrexate and 5-FU (CMF), one. Three patients were treated with tamoxifen. Only four of the 27 patients (14.8 per cent) responded to chemotherapy. Three of these patients presented with pelvic peritoneal metastatic implants and normal ovaries, and received chemotherapy with CAP following initial de-bulking surgery. Two had a partial response and survived 15 months and 10 months, respectively. One had a complete response and is free of disease five years after the initial diagnosis. The fourth responding patient presented with multiple bone metastases and received CAF for nine months. Both her bone pain and bone scan were improved, and she survived three years. Radiation therapy was given to 27 patients: 12 for brain metastases, eight for painful bone lesions, five for spinal cord compression following laminectomy, one for a painful left supraclavicular node, and one for painful liver metastases.

Surgery was the treatment for 17 patients: A craniotomy was performed in nine, a laminectomy in five, and total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH-BSO) in three.

There were 50 patients receiving no treatment. Most of these had presented with advanced debilitating disease, and treatment could not be instituted.

Survival

The median survival of all patients was four months, with the range from two and one half weeks to six years.

Twelve patients survived longer than 12 months (Table 3). All of these patients except one had predominantly localized disease at presentation. Seven patients presented with a single metastatic brain lesion and were treated with craniotomy and postoperative radiotherapy. Two patients presented with pelvic peritoneal carcinomatosis and were treated with surgical de-bulking and chemotherapy. One patient presented with an isolated right pleural effusion and was treated with only tube thoracotomy and a sclerosing agent. Another presented with an isolated T_8 cord compression and was treated with laminectomy and postoperative radiotherapy.

Discussion

Approximately 90-95 per cent of patients who present with cancer will have their primary tumor found with a limited diagnostic workup. This evaluation should include history and physical examination, chest x-ray, stools for occult blood, urinalysis, and prostatic acid phosphatase (in males). Further radiologic and endoscopic procedures become appropriate as a result of the initial evaluation (i.e., symptomatic areas, positive stools, etc.). If this evaluation is negative, then, with the possible exception of abdominal computerized tomography, no further diagnostic studies appear to be cost effective.

"Approximately 90-95 per cent of patients who present with cancer will have their primary tumor found with a limited diagnostic workup."

This limited approach is supported by the results of this series as well as by others (6, 7, 8). In this series, only three patients had their primary sites found after a very thorough radiologic and endoscopic workup. Nystrom (7) et al. reported finding the primary site after an extensive evaluation in 22 of 266

TABLE 3
Clinical Characteristics of Patients With ACUPS Surviving Longer Than 12 Months

	Age	*Sex*	*Site(s) of Disease*	*Treatment*	*Survival (months)*
1.	53	M	Right parietal brain mass and right cervical lymph node Left occipital mass	Craniotomy + post-operative radiotherapy (brain/nodes)	72
2.	74	F	Left occipital mass	Craniotomy + cranial radiation	14
3.	58	F	Left temporal lobe mass	Carniotomy + cranial radiotherapy	14
4.	64	M	T_8 cord compression	T_6-T_{10} Laminectomy + post-operative radiotherapy	13
5.	69	M	Right pleural effusion	Tube thoracotomy + intapleural tetracycline	16
6.	52	F	Left frontal lobe mass	Craniotomy + cranial radiotherapy	15
7.	58	F	Left temporal lobe mass	Craniotomy + cranial radiotherapy	14
8.	52	F	Multiple areas bone scan	Chemotherapy (CAF) + radiotherapy	36
9.	53	F	Carcinomatosis - pelvis	TAH + BSO; chemotherapy (CAP)	15
10.	42	F	Carcinomatosis - pelvis	TAH + BSO; chemotherapy	60
11.	61	F	Right occipital mass	Craniotomy + cranial radiotherapy	18
12.	57	F	Left parietal mass	Craniotomy + cranial radiotherapy	14

(eight per cent) patients who presented with ACUPS, and Stewart (4) et al. diagnosed eight of 87 (nine per cent.

In those 514 patients with ACUPS in whom an autopsy was performed, the most common primary sites found were either the lung or pancreas. Of 514 patients combined from 11 reported series in which the primary site was eventually diagnosed, 126 (25 per cent) had lung cancer and 90 (17 per cent) had pancreatic cancer (4, 6-15). Less common sites found were colon, hepato-biliary, stomach, liver, and ovary. In this report there were two cases of biliary tract carcinoma and one case of pancreatic, lung and fallopian tube carcinoma.

Several reasons may account for the reported failure to detect the primary site. These include spontaneous regression of the primary tumor through immunologic mechanisms, inadvertent removal of the primary site such as by skin biopsy or dilatation and currettage without careful pathologic examination of the extirpated tissue, and even spontaneous expulsion of an adenocarcinoma arising in a colon polyp (16, 17). However, a primary tumor which is too small to be detected clinically or radiologically is the most probable explanation for failure to detect a primary anatomic site.

The median survival of patients with ACUPS is poor. In seven large series in the literature (8, 10, 17-21) the median survival was two to six months. The median survival in our series was four months.

The mode of presentation influences survival. Patients whose predominant disease at presentation was localized (e.g., adenopathy, isolated CNS metastases, isolated bone metastases, etc.) and permitted local therapy (surgery and/or radiotherapy) were the longest survivors. Similar findings were reported by Didolkar (10) et al. and Jordan et al (13).

The role of chemotherapy in ACUPS is unclear. In a retrospective analysis of 591 patients with ACUPS obtained from 12 series in the literature, response rates to chemotherapy ranged from 0 to 30 per cent (3, 9, 10, 15, 22-29). In most of the series, the differences in mean survival between the chemotherapy-treated and untreated patients were not statistically significant. In our series, systemic chemotherapy resulted in disease amelioration in approximately 15 per cent (four of 27 patients) of those so treated. Three of the four responders had peritoneal carcinomatosis and responded to treatment for presumed ovarian cancer (i.e. surgical de-bulking and cytoxan, adriamycin and cisplatin). The favorable response to cisplatin-based chemotherapy and potentially prolonged survival of the patients with this particular presentation of ACUPS has been noted by others (30).

Future studies of patients with ACUPS should include a more complete pathologic review with electron microscopy, special stains, immunochemistry, tumor markers, and hormone receptors. The use of these modalities may uncover the primary sites without requiring more diagnostic procedures.

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Tic Disorders: An Overview

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Tics are purposeless and repetitive involuntary movements and vocalizations with variable and complex means of expression. Since up to 24 per cent of children can manifest tics at some point in their lives, growing interest has developed in the genetics, etiology, course, diagnosis, and treatment of the tic disorders. This article is a review of the current knowledge about tics and tic disorders.

Introduction

Although the word "ticque" originated in veterinary medicine to describe the movements of horses when they are restrained (1), the present definition used in modern medicine describes repetitive, rapid, sudden, involuntary movements of functionally related muscle groups that serve no evident purpose (2).

Tics themselves can be divided into three groups: motor, vocal and complex. Simple motor tics are usually meaningless rapid muscle movements demonstrated by blinking, grimacing, face, head, and neck movements, jerking of the trunk and extremities, and tensing of abdominal muscles.

Vocal tics are linguistically meaningless sounds including sniffing, coughing, clearing the throat, barking, hissing, snorting, repetition of letters, words, and phrases, involuntary cursing (coprolalia), clicking, spitting, and shrieking.

Complex tics are slower and appear more goal-directed such as squatting, jumping, twirling, repetitive grooming behaviors, repetitive touching or sniffing, obscene gestures ("copropraxia"), head-banging, self-biting, and scratching (3).

Classification

The Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (DSMIII-R; American Psychiatric Association, 1987, pp. 78-82) describes three separate classifications of tic disorders: Tourette's disorder, chronic motor or vocal tic disorder, and transient tic disorder. Each one of the three by definition has onset before age 21, and occurs independent of psychoactive substance intoxication or central nervous system disease.

The division in classification of the tic disorders can be seen as a continuum, from less to more severe (1). Tourette's disorder, also known as Tourette's syndrome, is the most debilitating of the disorders (4).

Both motor and vocal tics are present at some point in the disorder, and the tics occur daily for more than one year. Another feature is that the nature of the tics is very labile, in that the anatomic location, quantity, complexity, and severity will change over time.

> ***"A popular belief is that those with Tourette's syndrome suffer from hypersensitive dopamine receptors to endogenous dopamine, creating a dysfunction of the basal ganglia."***

Chronic motor or vocal tic disorder is differentiated by the singular nature of either motor or vocal tics occurring, but not both. Usually, the tics do not change in quality, quantity, or severity over time.

Finally, transient tic disorder is the least severe of the three tic disorders. It has a duration between two weeks to 12 months, and is generally considered to be a self-limiting disorder, often remitting by

early adulthood. The tics are very mild and do not interfere with the patient's level of functioning (5).

Epidemiology

Between 10 and 24 per cent of all children will manifest tics at some point in their lives, and the majority will be transient and improved with age (1). The prevalence of transient tic disorder has been found to be between 10 and 15 per cent among boys five to nine years of age (6).

The Tourette Syndrome Association has estimated that 100,000 people in the United States alone are affected by Tourette's disorder, with male-to-female ratio of 3 to 1 (3). Tourettes' disorder occurs in all major racial groups, and appears to have a stable pattern of clinical expression cross-culturally (4).

Genetics

In some families there appears to be a hereditary pattern consistent with an autosomal dominant mode of genetic transmission for Tourette's disorder (7). Approximately 30 to 50 per cent of cases are familial, although a great many cases of tic disorders are sporadic (3). Such findings point to a role for both genetic and environmental factors in the development of the tic disorders (5).

Etiology

Although the etiology is not well understood, it appears that the dopaminergic system plays an integral role. The finding that the dopamine receptor blocking agent haloperidol (Haldol) improves the symptoms of Tourette's syndrome has led to increased interest in the role of dopamine and dopamine receptors.

A popular belief is that those with Tourette's syndrome suffer from hypersensitive dopamine receptors to endogenous dopamine, creating a dysfunction of the basal ganglia (3). Other evidence to support this theory is the detrimental effect of stimulant medications, direct dopamine agonists, and dopamine precursors on the symptoms of Tourette's syndrome (5).

There is also evidence of noradrenergic involvement in the pathophysiology of Tourette's syndrome based on the beneficial effects of clonidine (Catapres), a drug which alters adrenergic mechanisms and decreases the release of the norephineprine at the synapse (7). The effectiveness of clonidine is controversial, however, as some of the promising results have not been replicated by other investigators. Furthermore, results from animal studies indicate that noradrenergic activity can alter dopamine-mediated activity, thus suggesting that clonidine's activity in improving Tourette's syndrome may involve indirect effects on the dopamine system (4).

There is insufficient evidence to implicate the serotonergic or GABAergic system in the etiology of Tourette's syndrome, although the drug clonazepam (Klonopin), a benzodiazapine which has serotonergic effects, has been reported to be effective in the treatment of Tourette's syndrome (7).

"It (pimozide) has a lower incidence of sedative and other side effects."

To date, the evidence for a specific biochemical etiology for Tourette's syndrome is obviously conflicting, and the various hypotheses should be regarded as speculative (8).

There is no firm evidence yet to implicate either perinatal factors or a structural neuropathologic defect in the etiology of Tourette's disorder. Nonetheless, investigators have reported a high incidence of abnormal EEGs in Tourette's syndrome cases compared to the general population. This, along with the presence of a higher reported incidence of neurologic soft signs and attentional deficits, has led to the suggestion of an underlying neurophysiologic dysfunction (5).

Natural History

Difficulties with impulse control, motoric hyperactivity and attentional problems often precede the development of motor and vocal tics in young children (5). Motor tics typically appear before vocal tics, and show a rostral-caudal progression involving the face and head first, with tics of the extremities and trunk developing later (7).

Phonic symptoms often develop after the motor symptoms.

Finally, the most disabling symptoms such as sexual or aggressive acts, rituals, or compulsions tend to present last (4).

Coprolalia was once believed to be present in the majority of cases, but the increased number of milder cases has reduced the incidence of coprolalia from 60 per cent to 33 per cent. This symptom can present in varying ways, from outward explosive statements, to the appearance of the words in thought but unverbalized, to the mumbling of parts of words (5).

Obsessive-compulsive behaviors and phobias (3) are found in approximately 15 to 20 per cent of cases. Such symptoms occurred later in the development course, at the mean age of 11 years (5). Infrequently, the obsessive-compulsive symptoms are of such severity as to overshadow the tic symptoms (7).

Numerous other phenomena have been associated with Tourette's syndrome. Up to 90 per cent of patients might also have attentional deficit disorder (9). An increased incidence of sleep disorders is reported (1), and minor and major depression is also reported and thought to be secondary to impairment of social, educational and vocational adaptation (5). General difficulties in social adaptation both at school and in later life have been reported (1).

The prognosis of the first reported cases of the fully developed syndrome was thought to be poor, but more recent studies are more favorable, and suggest that more than 50 per cent of patients can improve, and one third might actually recover (1). In the other extreme, clinical experience suggests that the most severe cases have the earliest age at onset and the severest early behavioral and attentional symptoms (4).

Differential Diagnosis

The differential diagnosis of tics includes choreiform, dystonic,

athetoid, myoclonic and hemiballismic movements, spasms, and dyskinesias. In addition, children with severe hyperactivity, autism, amphetamine intoxication, cerebrovascular accident, Lesch-Nyhan syndrome, Wilson's disease, Sydenham's and Huntington's chorea, and organic mental disorders may present with abnormal movements (4).

The tic disorder can be distinguished by the fact that it can be brought under voluntary control for short periods of time, and by its rapid and non-rhythmic nature, its disappearance during sleep, and the lack of evidence of underlying neurologic disorders (1).

Treatment

Medications are the mainstay of treatment (5). They provide only symptomatic relief, and are not curative (10).

If the patient is not severely afflicted at the time of initial evaluation, it is appropriate to consider an ongoing assessment with baseline monitoring before initiating medication (5). Milder cases are better left without pharmacologic treatment, providing all concerned are educated about the nature of the disorder, the prognosis, and the availability of medication should it be needed in the future (10).

Haloperidol (Haldol) is the drug of choice. It is recommended to begin at 0.5 mg. per day and not to raise the dose more rapidly than 0.5 mg. every three to seven days (5), until positive effects are seen. The side effects can be severe. Sedation, dysphoria, motor restlessness, and weight gain can be troublesome (1). Acute dystonia and extra pyramidal Parkinson-like effects can occur, but may be avoided by introduction of the medication at low dosage (10). Prolonged use of haloperidol also carries a risk of tardive dyskinesia (5).

Pimozide (Orap), a potent neuroleptic approved for use in this country in 1984, has been found to be equally effective to Haloperidol in reducing tics. It has a lower incidence of sedative and other side effects (10). The initial dose is one mg. per day and increasing by one mg. every three to seven days until symptoms abate. Pimozide can cause electrocardiogram changes such as bradycardia, QT prolongation, U waves, and T-wave inversion. Careful cardiac monitoring should be instituted with regular electrocardiograms (5). The Food and Drug Administration has not yet approved its use for children under 12 years of age because of lack of documentation of its safety (10).

Clonidine has been used in the treatment of tic disorders since 1979, is an easier medication to use than the neuroleptics, and is relatively free of serious side effects (10). After the neuroleptics, Clonidine is the most widely used agent in this country to treat Tourette's syndrome. Studies show that 50 per cent to 70 per cent of Tourette's syndrome patients may benefit from its use. Treatment is started with 0.05 mg. a day and titrated over several weeks to 0.15 to 0.30 mg. per day (5).

> ***"... more recent studies are more favorable, and suggest that more than 50 per cent of patients can improve, and one third might actually recover ..."***

The response to Clonidine is not immediate and may require several weeksbeforeimprovementoccurs(10). At low doses, fatigue can develop but usually subsides after several weeks. Orthostatic hypotension and irritability can occur at higher doses. Prolongation of the PR interval has also been reported (4). Following initial improvement, tolerance can develop to long-term treatment, and withdrawal symptoms can follow discontinuation (1).

Prevention

Genetic counselling may be indicated if multiple family members are affected. It is wise to avoid the use of stimulant medications in those who have close family members with tic disorders. Finally, for those vulnerable people who do present symptoms of hyperactivity, clonidine would be the preferred treatment for the tics (5).

Generic/Trade Names

Generic drugs (with trade names in parentheses) mentioned in this article are haloperidol (Haldol), pimozide (Orap), and clonidine (Catapres).

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President's Page

"Of all of the health care issues that face the Legislature, uncompensated care is the most difficult."

Legislation . . . '89?

The year 1988 was not a very important year for health legislation either on the national or state level. There was lots of rhetoric in Washington about health care issues but no major legislation was passed. Here in our state, there were several health bills introduced, but the only major bill that made it out of committee was the AIDS bill which, as you recall, was passed by the Legislature only to be vetoed by Governor Moore.

The WVSMA had no input into the original, vetoed AIDS bill, but through the diligent efforts of Dr. Michael Stump of Elkins, working with the Legislative Task Force on AIDS, a modified and much better bill was passed by a special session of the Legislature, signed by the Governor, and became law in Sepember. This law is a piece of legislation that physicians can be more comfortable with as they practice medicine even though it is more of a "civil rights" than a medical-protective act. This bill is now being looked at by many other states as a model for submission to their legislatures.

The coming year will prove to be a very important year both on the national and state level; 1989 will almost certainly be the year that congress will act on the resource-based relative value scale (RBRVS) as a method of compensating physicians for Medicare patients. The AMA at the December Interim Meeting in Dallas did not endorse the RBRVS, but did agree, with modifications, that the method of payment could be equitable. The AMA does not have the final word; congress, and only congress, has the authority to implement this system of payment. It will hold public hearings and listen to all parties, but if it feels that RVS is cost-saving and a more equitable form of payment, you can bet it will approve it.

The West Virginia Legislature will be facing many health care issues this year. The Medical Association will be following the dictates of the resolutions passed by the WVSMA House of Delegates to try to get some modifications of tort reform, to try and reduce the availability of tobacco products to minors, and to try again to get seatbelt legislation. Of course, the big issue of uncompensated or indigent care is to be reckoned with.

Of all of the health care issues that face the Legislature, uncompensated care is the most difficult. Not only do the legislators have to devise a system to serve the thousands of uninsured and underinsured in this state, but they also have to find ways to provide funds to implement the program. WVSMA has appointed a special ad hoc committee to work with the Legislature in dealing with these problems. The Legislative Committee for Indigent Care is now considering many different ways to improve access of health care to the indigent, and we hope to help provide input from the profession that will be equitable and reasonable. It is through a cooperative effort that reasonable health care legislation can be developed and implemented. We, as an Association, are willing and ready to work in any way we can to improve medical care and the access to that care.
—Bill M. Atkinson, M.D.

Closing Ranks

There were lots of reasons for groups to go away mad or at least to talk openly about such things. In Dallas at the AMA Interim Meeting in December it ended that no one and no group did go away mad.

RBRVS, the Resource-Based Relative Value Scale study, was given a tentative, provisional acceptance. No endorsement indeed! Just a rather long document was agreed upon laying out the strong and acceptable points of the RBRVS study along with the weak and incomplete parts that need work and eventually inclusions before the proposal can be considered for endorsement.

Equity was the key word in all the arguments. Equity in payment for medical services. Some looked upon the whole proposition as a ploy to split the profession, to turn the cognitive-reliant groups against the procedure-reliant groups. Greed would be used as the lever. It didn't turn out that way.

It's not that we lack any greedy individuals in the profession. We have our share of those. But we do not have any identifiably greedy *groups* within the profession. The need to avoid splintering at this time won overwhelming acceptance.

Everyone gave a little bit, agreed on what must be further studied and understood, and the big fight predicted just did not occur.

Final acceptance of any RBRVS by the entire profession will not be without risk. The Government has had a problem for a number of years trying to get a handle on us all at the same time. The medical profession has been likened to a cottage industry with the connotation that there are too many of us out there independent, doing our own thing in our own way, unencumbered with group obligations for there to be any hope that any system intent on controlling us could be a success.

In our quest to achieve equity we may be helping to forge a link in a chain which will one day bind us. Such a day will be a sad one both for us and for our patients. We need to exercise great care in our continuing pursuit of an equitable RBRVS.

The one most important and most reassuring action to be noted in Dallas is the closing of Medicine's ranks on a very divisive issue. That act can be no source of joy nor of reassurance to those who would finally control Medicine. It's back to the drawing board for them, and let's see what they have up their other sleeve for us.—SDW

Worship or Affection?

A recent article in a popular journal has one physician speaking of another as an "old-fashioned doctor who enjoyed the fact that his patients worshipped him."

Perhaps we can accept the fact that worship is too strong a word to describe what many physicians would want in their relationship with patients. Certainly they could hope for trust, loyalty and, yes, even affection. All of these are qualities one would seek in a friend.

Many physicians seem cynical of efforts of other physicians to build this kind of rapport with patients. This is surprising because virtually every malpractice seminar points to the lack of relationship with patients as a primary factor in liability suits.

It is as though some of our colleagues make the assumption that one can be kind and considerate to patients or technically adept and knowledgeable, but not both at the same time. Worse is the oft-times unstated suspicion that the physician who works diligently at practicing the art of medicine is concealing deficiencies in technical skill and understanding.

What is needed, of course, is a blend of the art and science of medicine. The physician who derides the "old-fashioned" approach to patients needs to start incorporating some interpersonal practice skills.

It's equally important that chutzpah and blarney not be substituted for current medical knowledge. Allowing time for continuing medical education is essential. There is no substitute for keeping up.

Significantly, the 1984 GPEP Report *(Physicians for the Twenty-First Century,* a report of the panel on the General Education of the Physician) of the Association of American Medical Colleges, calls on the nation's medical schools to build into their teaching programs ways of assuring that graduates will enter medicine with the proper blend of art and science. How well the schools are heeding and achieving this objective remains to be seen.—DZM

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Occupational/Industrial Medicine Mid-Winter Clinical Conference Opener

Low back problems and noise-induced deafness will get a close look during the opening scientific session on "Occupational/Industrial Medicine" for the 22nd Mid-Winter Clinical Conference.

The session will begin at 2 P.M. Friday afternoon, January 27, with the annual CME event to continue through Sunday, January 29. Sponsors are WVSMA and West Virginia University and Marshall University schools of medicine.

The opening-session speakers and topics will be "Impact of Low Back Problems in Current Medical Practice," Mario C. Battigelli, M.D., Director, Institute of Health and Safety, WVU School of Medicine, Morgantown; "Low Back Syndrome: Management, Interventions and Results," Peter Curtis, M.D., Professor of Family Medicine, Department of Medicine, University of North Carolina;

"A Practical Approach to Non-Surgical Treatment of Low Back Syndrome," Sandy Burkart, Ph.D., Director, Department of Physical Therapy, WVU School of Medicine, Morgantown; "Occupational Trauma and the Medical Practitioner in West Virginia," Thomas R. Bender, M.D., Director, Division of Safety Research, National Institute for Occupational Safety and Health (NIOSH), Morgantown; and "Noise-Induced Deafness: The Role of Practicing Physicians," Gregory R. Wagner, M.D., Chief, Occupational and Environmental Health Division, Department of Family and Community Health, MU School of Medicine.

Mario Cesare Battigelli, M.D.

Peter Curtis, M.D

Sandy Burkart, Ph.D

Thomas R. Bender, M.D.

Other Speakers Announced

Also speaking during the conference, it was announced by the Program Committee, will be Elizabeth A. Funk, M.D., during a "Potpourri" of Topics Saturday morning, and Jane Kurucz, M.D., during the "Surgery" session Saturday afternoon.

Doctor Funk will speak on "Sociopolitical Aspects of AIDS." She is Assistant Professor of Medicine, Department of Medicine, WVU Health Sciences Center/ Charleston Division, and epidemiologist, Charleston Area Medical Center.

Doctor Kurucz, MU Assistant Professor of Surgery, will discuss "Breast Masses: The Challenge in Surgery."

Bill M. Atkinson, M.D., Parkersburg, WVSMA President, will open the Conference Friday with welcoming remarks.

The traditional, concurrent Physicians' Session and Public Session (see separate stories in this issue of the Journal) will be held Friday evening beginning at 7 o'clock, and "Unstable Myocardium," as announced earlier, will be the discussion area for the Sunday morning session.

Utah, Other Posts Held

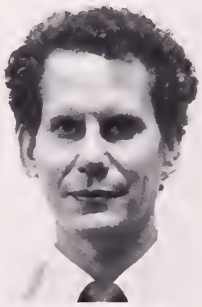
Doctor Battigelli came to WVU in March, 1988, from the University of Utah School of Medicine where he was Professor, Department of Family and Community Health.

A native of Florence, Italy, he became a United States citizen in 1964. He received his M.D. degree from the University of Florence in 1951, an advanced degree and certification in occupational medicine and toxicology in 1954 from the University of Milan, and an M.P.H. degree in occupational health in 1957 from the University of Pittsburgh.

Doctor Battigelli also has held teaching posts at Duke University, University of North Carolina and University of Pittsburgh. He is the author or co-author of 35 scientific and review articles and nine books or book chapters.

Research Director

Doctor Curtis, born in Czechoslavkia, has been on the faculty of the University of North Carolina since 1976. He currently is Director of the Research Section, Department of Family Practice, at the University of North Carolina and



Gregory R. Wagner, M.D.

Jane A. Kurucz, M.D.

'Graying of America' Public's Topic

"Graying of America" will be the focus of the Public Session for the 1989 Mid-Winter Clinical Conference Friday, January 27, at the Holiday Inn-Huntington-Gateway (see Conference story in this issue of the *Journal*).

The 7 P.M. program, held concurrently with the Physicians' Session, will be moderated by Warren Point, M.D., of Charleston.

Presenters will be:

Betty Rickenbacker, West Virginia Medicare Manager, Nationwide Insurance, Medicare Division, Charleston, "Just What Does Medicare Cover?;" Shirley Neitch, M.D., Associate Professor of Medicine; and Chief, Section of Geriatrics, Department of Medicine, Marshall University School of Medicine, "Financing Nursing Home Care," and William M. Midkiff, Policy and Rate Analyst, West Virginia Department of Insurance, Charleston, "Other Health Care Insurance Needed by the Elderly."

WVSMA officers and members are being asked by the Program Committee to make patients and other lay persons with whom they come in contact aware of the public program and encourage their attendance. Both personal contacts and local notices to the public by component societies through the media and other means are suggested.

Research Advisor for its affiliated family medicine program

Doctor Curtis was graduated from London (England) University, and received his medical degree in internal medicine in 1967 from the Royal College of Physicians in London, and advanced degrees in obstetrics and general practice from the Royal College of Obstetricians and Gynecologists and the Royal College of General Practitioners.

He completed postgraduate work in England and was in practice as a family physician in Winchester, Hampshire, England, for four years before coming to this country. He is board certified in family practice, and is a Diplomate of the American Board of Family Practitioners.

Doctor Curtis is a member of the Health Services Review Committee, North American Primary Care Research Group; Editorial Committee, Family Medicine; MBX Committee, National Board of Examiners, and Study Section, Research on Low Back Pain, Foundation Chiropractic Education and Research (April, 1987).

He is the author or co-author of some 76 scientific articles, two books, and 13 book contributions.

On WVU Faculty Since 1970

Doctor Burkart received his B.S. degree in physical education from East Stroudsburg (Pennsylvania) State College in 1966, and his Certificate in Physical Therapy in 1967 from the University of Pennsylvania. He earned his Ph.D. in anatomy from WVU in 1977.

Doctor Burkart has been on the WVU faculty since 1970 and is presently Professor and Chairman of both the clinical and educational programs.

He is the past President of the Orthopedic Physical Therapy Section of the American Physical Therapy Association, and is a past member of the American Board of Physical Therapy Specialty.

Doctor Burkart has lectured extensively in the United States on topics related to orthopedic physical therapy with special reference to shoulder examination and rehabilitation, and topics on an integrated approach to the examination and rehabilitation of low back pain.

Preventive Medicine Specialty

Doctor Bender has served assignments with the Centers for Disease Control from 1969 through the present, having been appointed to the Morgantown post in May, 1988. He came to Morgantown from Washington, DC, where he was Senior Epidemiological Research Advisor to the Office of Health, Bureau for Science and Technology, Agency for International Development. He also has served with CDC in Hawaii and Alaska.

Doctor Bender was graduated from California State College, and received his M.D. degree in 1968 from Hahnemann Medical College and Hospital. He earned an M.P.H. degree in 1974 from Johns Hopkins University School of Hygiene and Public Health. His postgraduate work included a mixed medical internship at WVU and residency in general preventive medicine at Johns Hopkins.

Doctor Bender, certified by the American Board of Preventive Medicine, is the author or co-author of some 18 scientific articles.

State Committee Appointments

Doctor Wagner, on the MU faculty since 1982, was graduated from Harvard College, and received his M.D. degree in 1974 from the Albert Einstein College of Medicine. He interned at Cambridge (Massachusetts) Hospital, and completed a residency in internal medicine at Harvard.

He is a member of the Social Security Disability Task Force of the West Virginia Legislature Joint Committee, Chairman of the Juvenile Justice Committee (facilities review panel) of the State Supreme Court, and was a member of the Committee on Hearing Loss Standards, West Virginia Workers' Compensation Fund, in 1984.

AIDS Lecturer

Doctor Funk came to CAMC in 1984 from St. Louis, Missouri, where she had been in private practice in infectious diseases since 1982 and was on the clinical faculty of St. Louis University.

Alternative to Tort Reform Presented

"AMA's Alternative to Tort Reform" will be the title for the Physician's Session during the 1989 Mid-Winter Clinical Conference (see accompanying story).

The program will be held from 7-9 P.M. Friday, January 27, at the Holiday Inn—Huntington-Gateway.

Speakers will be James S. Todd, M.D., Senior Deputy Executive Vice President, American Medical Association, Chicago, and Don R. Sensabaugh, Jr., Esquire, Parnter in the law firm of Kay, Casto & Chaney, Charleston; and WVSMA legal counsel.

Michael M. Stump, M.D., Elkins, WVSMA Vice President, will be moderator.

She was Chairperson of the CAMC AIDS Task Force and a member of the West Virginia Department of Health AIDS Task Force in 1988, and has lectured frequently on that topic before both medical and lay groups during the past several years.

Doctor Funk was graduated from Bluffton (Ohio) College, and received her M.D. degree in 1977 from Indiana University. She completed a residency in internal medicine and a fellowship in infectious diseases at the University of Missouri.

She is Chairperson of the CAMC Infection Control Committee, and was Chairperson of the WVU Research Advisory Committee in 1987.

WVU Degrees

Doctor Kurucz, born in Bowling Green, Ohio, received both her undergraduate degree and M.D. degree (1983) from WVU. She completed an internship and residency in general surgery at Alton Ochsner Foundation Hospital in New Orleans, and was named Outstanding Surgery Teaching Resident there in 1987-88.

Registration

The conference registration fee is $75, with checks to be made payable to WVSMA and mailed to WVSMA at P.O. Box 4106, Charleston, WV 25364. There is no fee for residents, medical students and nurses. The fee for non-members is $100.

The Holiday Inn Gateway is offering a special room rate of $52 (single or double). Specify WVSMA when making reservations to obtain the special rate. Physicians outside the Huntington area who register with WVSMA in advance of the Conference dates will recive a room reservation form for the Holiday Inn Gateway. When returning the form, be sure to list "WVSMA" on the "group name" line.

Other Speakers

Speakers and topics not named above, and as announced previously, are:

Saturday Morning ("Potpourri of Topics") — "The AMA View of Resource-Based Relative Value Study (RBRVS)," James S. Todd, M.D., Senior Deputy Executive Vice President, American Medical Association, Chicago; "Benefit Management Program," Thomas S. Clark, M.D., Medical Director, Blue Cross/Blue Shield West Virginia, Inc., Morgantown, and Janet G. Reed, R.N., M.S., Vice President, Benefit Management Program, Blue Cross/Blue Shield West Virginia, Inc., Charleston;

Saturday Afternoon ("Surgery")—"Reversal of Coronary Artery Disease: Fact or Fantasy," Caldwell B. Esselstyn, Jr. M.D., Head, Section of Thyroid and Parathyroid Surgery, Department of General Surgery, The Cleveland Clinic Foundation, and "Surgery, A Changing Discipline: Trauma," James P. Boland, M.D., Professor and Chairman, Department of Surgery, WVU Health Sciences Center/Charleston Division;

Sunday Morning ("Unstable Myocardium")—"Current Status of Coronary Angioplasty," Stafford G. Warren, M.D., Clinical Professor of Medicne, WVU Health Sciences Center/Charleston Division; "Thrombolytic Therapy," Harold Selinger, M.D., Director, Heart Institute of West Virginia, CAMC/Memorial Division, Charleston, and "The Evolution of Coronary Artery Bypass Graft," Ronald C. Hill, M.D., Assistant Professor of Surgery, WVU Health Sciences Center, Morgantown.

AIDS Disc Library Offered by Society

Compact Library: AIDS, a comprehensive medical library of AIDS literature on CD-ROM, is now available from The Medical Publishing Group of The Massachusetts Medical Society.

This product provides the full text of original journal articles, textbook and bibliographic data on all aspects of AIDS, linked and integrated into one source of information.

Designed for use by clinicians, researchers, nurses, social and public health workers, hospital administrators, medical librarians and educators, Compact Library: AIDS was developed to meet the needs of all professionals requiring immediate, accurate AIDS information.

Discs Every Three Months

Compact Library: AIDS is sold on an annual subscription basis, with subscribers automatically receiving a new, updated disc every three months. Compact Library: AIDS works with most IBM personal computers and compatibles, so there are no phone lines, modems, on-line charges, or transmission problems. The most significant advantage of the compact disc library, however, is the full integration of all different types of information on AIDS from a variety of biomedical sources, the medical society said.

The annual subscription price is $875.

The primary information source on the AIDS disc is the *AIDS Knowledge Base* from the San Francisco General Hospital. This electronic textbook is written and continually updated by leading AIDS specialists and contains current information on epidemiology and transmission, testing, ARC, pediatric AIDS, education, prevention, and policy and ethical issues.

An online version of the *AIDS Knowledge Base* is available through BRS/Colleague, the leading online medical service. A print version is planned from the Medical Publishing Group. Available on a subscription basis, it will have a loose-leaf format to accommodate bi-monthly updates.

In addition to the *AIDS Knowledge Base,* Compact Library: AIDS includes a subset of the MEDLINE database with bibliographic references and abstracts of articles relating to AIDS from some 3,200 biomedical journals published throughout the world. The disc also contains the full text of articles about AIDS from leading medical journals including *Annals of Internal Medicine, British Medical Journal, Lancet, Morbidity and Mortality Weekly Report* (MMWR), *Nature, Science,* and *The New England Journal of Medicine.*

Software and Hardware

Compact Library: AIDS can be used on an IBM XT, AT, PS/2 or compatible with 640K of memory. A hard disk with at least one megabyte of available space is needed; two megabytes are recommended. In addition, a 360K 5¼" or

720K 3½" drive is required. Either the Amdek LD-1 or Hitachi 1502S compact disc drive with interface card may be used. The only software necessary is DOS 3.0 or higher with Microsoft CD-ROM extensions.

Compact Library: AIDS is the newest product of The Medical Publishing Group (MPG), the publishing division of the Massachusetts Medical Society. MPG publishes *The New England Journal of Medicine* and prints and distributes *Morbidity and Mortality Weekly Report*.

For more information, contact Bart Rubenstein, The Medical Publishing Group, 1440 Main Street, Waltham, MA 12054, 617/893-3800; or Laura Hoffman, Hoffman-Daggett Associates, 431 Post Road East, Suite 660, Westport, CT 06880, 203/454-4505.

WVACEP Conference February 8-9

The fourth annual winter conference of the West Virginia American College of Emergency Physicians (ACEP) and Ohio ACEP will be held at Canaan Valley February 8-9.

The registration fee is $150; $175 for non-members.

For additional information, contact Sandy Warner, Ruby Memorial Hospital Emergency Department-Attn: WVACEP, Morgantown, WV 26506. Telephone 304-293-2404.

"I'm glad to make housecalls. I couldn't afford to keep my office open any longer."

Wellsburg at Six Months

4,055 Pounds Shed, Salt Cut

The residents of Wellsburg, who pledged last May to adopt healthier lifestyles, have made substantial progress in improving their health through the Bayer Wellness Program, according to the sponsor, the Bayer (Aspirin) Company.

The two-year, $4-million health promotion program is designed to reduce the risk of heart disease. It was launched last May to educate and motivate an entire community to improve its health by improving diet, cutting chronic stress, exercising more regularly, and not smoking.

An independent telephone survey, conducted by the Wirthlin Group, reports that since the program launch six months ago, the community of Wellsburg has made dramatic strides in reducing the intake of dietary fat and salt, controlling weight and increasing the frequency of exercise. There also has been a decline in the number of people who smoke. In addition, a health screening of over 800 program participants at the six-month mark reveals improvements in weight, cholesterol, pulse rate, body fat and blood pressure during the initial six-month period.

High-Fat Foods Cut

More specifically, the Wirthlin survey reports that three quarters of the residents of Wellsburg and 90 per cent of the Bayer Wellness Program participants have cut down on high-fat food since the program was launched. In 1987, 59 per cent of Wellsburg residents were heavy consumers of high-fat foods like red meat, eggs, butter, fried foods, bacon and hot dogs. In October 1988, just 38 per cent of Wellsburgers were heavy consumers of such foods—a drop of more than 20 per cent, according to the survey. Seventy per cent say they look for food products that are low in fat or cholesterol, and regular consumption of whole grains, fish and poultry has increased since last May.

Salt consumption also has dropped. In 1987, 59 per cent of Wellsburg residents—about the same proportion as for the nation as a whole—said they avoid salt in their diet. After six months of the program, 71 per cent of the community avoids salt, and half of the community says it looks for low-salt food products when shopping.

Exercising in Wellsburg also has increased. Some 65 per cent of the residents report they are getting more exercise now than they did before May. In 1987, 39 per cent of the residents exercised three days per week. Now, 45 per cent exercise three days a week or more. An increase in brisk walking and aerobic exercises was reported. Both exercises are emphasized by the program. Some 65 per cent of residents say the progam has helped them to control their weight.

Smoking Drops

The incidence of smoking also has dropped since May, from 28 per cent—the national average—to 24 per cent. One half of those who have successfully quit participated in the program's "smoke stoppers" course.

The 811 participants who were screened in May were screened again in November. This group has shed a total of 4,055 pounds—more than two tons—in the six-month period. Moreover, their average cholesterol has dropped from 221 to 211—a reduction of four and one half per cent—resulting in a nine per cent reduction in heart attack risk. (A study by the National Institutes of Health has shown that a one-per cent reduction in cholesterol blood level results in a two-per cent reduction in the risk of heart attack, Bayer said.)

Knowledge about safe cholesterol levels has increased among the entire community. Today, residents are three times more likely than the nation as a whole to know that a cholesterol reading of 200 or less is acceptable—the standard established by the NIH. Before the program began, only nine per cent of the community knew the accepable cholesterol level.

(Continued on next page)

In the last six months, 25 per cent more of the screening participants (326 as compared to 260) have brought their cholesterol levels below 200. Body fat also has dropped from 35 to 32 per cent. Resting pulse rate and blood pressure have shown improvement as well.

The Bayer Company selected Wellsburg (population 11,000), because it is representative of many smaller American cities and towns that lack the resources for comprehensive, health-promotion programs. Wellsburg also interested the Company's health experts because, like all of West Virginia, it exhibits a higher incidence of heart disease than the nation as a whole.

Other Meetings With Conference

Other meetings, etc. are scheduled in conjunction with the 1989 Mid-Winter Clinical Conference to be held in Huntington, January 27-29 (see Conference story elsewhere in this *Journal*.) at the Holiday Inn-Gateway. They are:

Thursday, Jan. 26

7-9 P.M.—Meeting, Public Health Officers. David K. Heydinger, M.D., Director, WV Department of Health, presiding.

Friday, Jan. 27

10 A.M.—Meeting, officers and executive secretaries, WVSMA's component medical societies. Bill M. Atkinson, M.D., President, presiding. Guest: Susan Kelsey, Account Executive, Membership Department, AMA, Chicago. *Luncheon at noon.*

1 P.M.—Meeting, Young Physicians. Stephen L. Sebert, M.D., presiding.

5 P.M.—West Virginia Psychiatric Association. Larry C. Smith, M.D., President, presiding. Speaker: Barbara P. Guyer, Ph.D., Professor of Special Education and Director of Higher Education for Learning Problems, MU, "Dyslexia: A Student's Learning Disorder." *Note:* Scientific session open to all attendees.

5:45 P.M.—Business Meeting, WVPA. Doctor Smith, presiding.

Saturday, Jan. 28

12 Noon—Council Luncheon, West Virginia Chapter, American College of Physicians. William O. McMillan, Jr., M.D., Governor, presiding.

12 Noon—Membership Luncheon, West Virginia Academy of Ophthalmology. Michael A. Fiery, M.D., President, Presiding. *Program* (1 P.M.): "Surgical Treatment of Thyroid Eye Disease," John V. Linberg, M.D., Associate Professor of Ophthalmology, WVU School of Medicine, Morgantown.

6:30—Reception—Courtesy WVU School of Medicine and its Alumni Association. James M. Stevenson, M.D., Interim Dean, and Ronald L. Wilkinson, M.D., President, presiding.

7:30—Dinner, with Entertainment by the Renaissance Singers. Price of Dinner subsidized in part by McDonough Caperton Insurance Group, and Entertainment courtesy of Cabell County Medical Society. (Cost of the dinner will be $10 per person and tickets may be reserved by calling the WVSMA office. The telephone number is 925-0342 or 1-800-257-4747. Tickets may be picked up at the WVSMA's registration desk after 1 PM on Friday, January 27.)

Sunday, Jan. 29

7:30 A.M.—Breakfast Meeting. West Virginia State Medical Association's Cancer Committee. Catalino B. Mendoza, Jr., M.D., Chairman, *Presiding.*

New Safety Belt Use Group Formed

West Virginia Traffic Safety Now, Inc., is a newly formed, not-for-profit organization whose goal is to pass a safety belt use law in West Virginia during the 1989 legislative session, according to the group's President, James Kessel, M.D., Charleston.

The new group is dedicated to reducing traffic accident-related injuries and fatalities by encouraging greater safety belt use, educating West Virginians about safety belts through the passage of a belt use law, encouraging enforcement of the child safety seat and belt use law, and encouraging broader understanding of traffic safety laws.

West Virginia Traffic Safety Now, Inc., (WVTSN) was formed after the West Virginia Safety Belt Coalition was dissolved. The new group has been organized with the same goal as the coalition, but its purpose has been enlarged to encompass other traffic safety education issues.

In the past, the effort to pass a safety belt law was spearheaded by the West Virginia Safety Belt Coalition which was formed in 1984 and reorganized into WVTSN in 1988. Coalition members were successful over the four-year period in building up support among lawmakers and communities throughout the state for a safety belt use law. This culminated in the passage of a bill in both houses of the state Legislature for the first time in 1988. The bill was ultimately vetoed by Governor Moore.

"As a result, West Virginia Traffic Safety Now, Inc., faces a tough campaign this legislative session in achieving its primary goal of a belt use law," Doctor Kessel said.

"There is already a strong grassroots base of support on which to build, but we are continually seeking to increase our number of supporters and to increase public awareness of the need to buckle up. Many organizations throughout the state have already pledged their support and efforts to WVTSN."

County Societies

MONONGALIA

The Monongalia County Medical Society met November 1 in Morgantown.

The speaker was Mario C. Battigelli, M.D., Director, Institute of Health and Safety, West Virginia University Health Sciences Center, Morgantown.

His subject was Workers' Compensation.

New and retired members were approved.—Robert L. Murphy, Executive Secretary.

WESTERN

Bill M. Atkinson, M.D., WVSMA President, was guest speaker for the meeting of the Western Medical Society in November.

Doctor Atkinson reviewed the importance of being a part of organized medicine, and outlined WVSMA's 1989 legislative program. He also discussed the WVSMA Council-approved, proposed change in the Bylaws and Constitution to provide, in essence, a Councilor for each component society regardless of size as a means of improving both the representation of Council and the flow of information to membership.

The Society approved a resolution calling for WVSMA annual meetings to be held in Charleston every other year.

New officers were elected.—Aaron D. Cottle, M.D., Secretaty.

Urology Meeting

The West Virginia Urological Society will hold its spring seminar March 31-April 12 in Huntington at the Radisson Hotel.

The program will be "Prostate Disease and Lithotripsy—New Concepts."

Rocco A. Morabito, M.D., President, is Program Director.

For more information, contact Doctor Morabito at 2828 First Avenue, Suite #305, Huntington, WV 25702. Telephone 304-525-3711.

Poetry Corner

Numbers

Your numbers were always impressive

4.8 yards per carry as a high school back
A 3.7 GPA at Princeton

Riding a crest of formidable numbers
You charged into the future
Head down—
A force with which to be reckoned
Much like the ball carrier
Who broke into our secondary my sophomore year—

As I lowered my shoulder
Your knees churned up like a tidal wave flinging me
Helpless
As a freshly caught fish
Into a heap of October dust.

If only you could have seen my eyes—
Looking up—
A mixture of fear, pain, and envy
That followed you into the end zone:
Would you have stopped to study them?
Would you have noticed them at all?

A promising pre-med
On a football scholarship to a prestigious university
You were wide open and sailing down the sidelines
When something tripped you up—
A muscle cramp? A strain?
A rough spot in the turf?

Your numbers took an ominous twist
Acid, they said, made your brain stumble
Miss key blocks, drop easy passes.

Late in the fourth quarter
Wide open in the end zone
medical school
Slipped through your fingers.

Fueled on booze
You zig-zagged through the next ten years,
Job to job, place to place,
Desperate—
A broken field runner unable to awaken from a nightmare game
Where the goal line constantly changed
And jersey colors blurred
So that even blockers became tacklers
In a paranoid frenzy.

I saw you next on a November afternoon.
Panting heavily, bloated with 50 extra pounds
You pushed baskets of tobacco across a warehouse floor—
A manual laborer at $3.25 an hour.

(Continued on next page)

Poetry Corner

(Continued from Page 23)

From somewhere out of the past you recognized my face
A nearly forgotton audible floating back from long ago.
Studying me for a moment, you said quietly
"You're a doctor now, aren't you?"
Your hollow face grim, staring intently—
It was then that I noticed your eyes:
Silent, fixed—
mixture of fear, pain, and envy
That made me shiver in the November cold.

Watching you return to your work
I desperately tried to make sense of our numbers—
Numbers that mocked and bellowed—
And in the end said nothing.

Turning away quickly
I headed back to the hospital—
Shaken—
Feeling suddenly cold and alone
in the end zone.

Donald R. Frey, M.D.
Clarksburg

Radon Detection Kits Offered

The American Lung Association of West Virginia (ALAWV) is offering radon detection kits for sale in an effort to urge state residents to test their homes for radon levels. The price is $2 (plus $1 for shipping and handling). These test kits provide a simple and inexpensive means of screening in-home radon levels, ALAWV said. After the air sample is taken, it must be returned to Air Chek Laboratories for analysis. The cost for this service is $5.

Many West Virginians are not aware of what radon is and the dangers it poses to health; of those who have heard of radon, many have misconceptions about it, ALAWV commented.

Currently, radon statistics for West Virginia are inconclusive because state-wide tests have not been conducted.

Because quantities are limited, persons interested in purchasing radon testing kits should contact the ALAWV as soon as possible. To order by phone: (304) 342-6600. Mail orders (include $3 per kit, check or money order): RADON, P.O. Box 3980, Charleston, WV 25339. Mastercard and Visa accepted.

New Members

The following physicians were welcomed in November as new members of the West Virginia State Medical Association:

Cabell

David Heffernan, M.D, 1616 13th Avenue, Suite 2D, Huntington 25701

William S. Shiels, Jr., M.D., P. O. Box 910, Huntington 25712

Jack Steel, M.D., 2828 First Avenue, Suite 400, Huntington 25702

Philip Stevens, M.D., 3 Stonecrest, Huntington, 25701

Kanawha

R.E. Koon, M.D., 1217 Virginia Street East, Charleston 25301

Monongalia

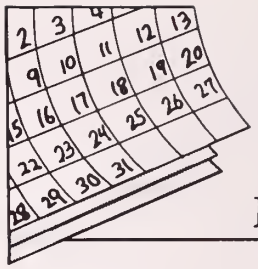
Alvaro R. Gutierrez, M.D., WVU Medical Center, Department of Neurology, Morgantown 26506

Anne E. Hackett, M.D., WVU Medical Center, Department of Anesthesiology, Morgantown 26506

David M. Morgan, M.D., WVU Medical Center, Department of Behavioral Medicine, Morgantown 26506

Residents

John M. Zambos, M.D., 112 Ellen Lane, Apartment #5, Morgantown 26506



Medical Meetings

January

24-27—Southeastern Surgical Conference, Tarpon Springs, Fla.
27-29—22nd Mid-Winter Clinical Conference, Huntington.

February

5—Am. College of Medical Imaging, Los Angeles.
8-9—Fourth Annual Winter Conference, WV ACEP, Ohio ACEP, Canaan Valley.
9-14—Am. Academy of Orthopaedic Surgeons, Las Vegas.
24—Am. Academy of Allergy & Immunology, San Antoino, Tex.

March

19-23—Am. College of Cardiology, Anaheim, Calif.
19-24—Am. Society for Clinical Nutrition, New Orleans.
19-24—Am. Assoc. of Immunologists, New Orleans.
19-24—Am. Assoc. of Pathologists, New Orleans.
23-26—Am. Medical Student Association, Las Vegas.
31-April 2—WV Urological Society Spring Seminar, Huntington.

April

2-5—Am. Society of Abdominal Surgeons, Tampa, Fla.
13-16—Am. College of Physicians, San Francisco.
14-16—West Virginia Chapter, Am. Academy of Family Physicians, Morgantown.
28-30—International College of Surgeons—U.S. Section, San Francisco.

May

7-12—Am. Roentgen Ray Society, New Orleans.
11-14—Am. Geriatrics Society & Am. Federation for Aging Research Annual Meeting (46th), Boston.
14-17—Am. Thoracic Society, Cincinnati.
17-19—Am. Trauma Society, Washington, DC.
21-23—Am. Society of Clinical Oncology, San Francisco.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M. D., MU Director of Con-tinuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Jan. (vacation)

Brownsville, PA, ★ General Hospital, 11 A.M.—Jan. 5, Medical & Surgical Treatment of Difficult Pain Problems, G. Robert Nugent, M.D.

Jan. 26, Degenerative Spine Disease, Howard H. Kaufman, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Jan. 12, Rheumatology Update, Alfred K. Pfister, M.D.

Feb. 9, GI Update, Warren Point, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Jan. 4, Laser Surgery for the General Surgeon—State of Laser Surgery, What is Available at WVU, Abnash Jain, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Jan. 3, AIDS Update, Rashida Khakoo, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Jan.-Feb. (vacation)

Grantsville, • Calhoun General Hospital, 11 A.M.—Jan. 9, TB in the 1980s, Elizabeth Funk, M.D.

Hurricane, • Putnam General Hospital, 8:30 A.M.—Jan. (no program)

Logan, • General Hospital, 11:30 A.M.—Jan. (no program)

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Jan.-Feb. (vacation)

Man, • Appalachian Regional Hospital, 7 P.M.—Jan. (no program)

Montgomery, • General Hospital, 12 P.M.—Jan. 4, Commonly Used Anesthetic Agents, J.K. Lilly, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Jan. 12, Workup & Treatment of Bowel Obstruction

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Jan. 12, Update Chemotherapy, Steven Jubelirer, M.D.

Feb. 9, GI Update, Warren Point, M.D.

Parkersburg, ★ Camden-Clark Hospital—Jan. 25, Childhood Asthma Approaches to Younger Children, Older Children & Newer Pharmacological Aspects, Beverly T. Ellington, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Jan. 13 (program tba)

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Jan. 26, Trauma Update, James Kessel, M.D., and Teresa Wagenknecht, R.N.

Spencer, • Roane General Hospital, 12:30 P.M.—Jan. 17 (program tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Jan.-Feb. (vacation)

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Jan. 10, Myelodysplastic Syndromes & Interpretation of Bone Marrow Aspirates, Peter C. Raich, M.D.

Jan. 24, Infections Associated with IVs & Catheters, Melanie Fisher, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Jan.-Feb., (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Jan.-Feb. (program tba)

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Jan.-Feb. (vacation)

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The 22nd Mid-Winter Clinical Conference

WEST VIRGINIA STATE MEDICAL ASSOCIATION

Holiday Inn—Gateway
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Huntington, WV

January 27-29, 1989

Program Outline

FRIDAY, JANUARY 27—Occupational/Industrial Medicine—2 to 5 P.M.

"Impact of Low Back Problems in Current Medical Practice."—Mario C. Battigelli, M.D., Morgantown; "Low Back Syndrome: Management, Interventions and Results."—Peter Curtis, M.D., Chapel Hill, NC; "A Practical Approach to Non-Surgical Treatment of Low Back Syndrome."—Sandy Burkart, Ph.D., Morgantown; "Occupational Trauma and the Medical Practitioner in West Virginia."—Thomas R. Bender, M.D., Morgantown; and "Noise-Induced Deafness: The Role of Practicing Physicians."—Gregory R. Wagner, M.D., Huntington.

SATURDAY, JANUARY 28—"Potpourri" of Topics—9 AM to Noon

"Sociopolitical Aspects of AIDS."—Elizabeth A. Funk, M.D., Charleston; "The AMA View of Resource Base Relative Value Study (RBRVS)."—James S. Todd, M.D., Chicago; and "Benefit Management Program—BC BS of WV."—Thomas S. Clark, M.D., Morgantown; and Janet G. Reed, R.N., M.S., Charleston.

SATURDAY, JANUARY 28—Surgery, A Changing Discipline—2 to 5 P.M.

"Reversal of Coronary Artery Disease: Fact or Fantasy."—Caldwell B. Esselstyn, Jr., M.D., Cleveland, OH; "Surgery, A Changing Discipline: Trauma."—James P. Boland, M.D., Charleston; and "Breast Masses."—Jane Kurucz, M.D., Huntington.

SUNDAY, JANUARY 29—Unstable Myocardium—9 A.M. to Noon

"Current Status of Coronary Angioplasty."—Stafford G. Warren, M.D., Charleston; "Thrombolytic Therapy."—Harold Selinger, M.D., Charleston; and "The Evolution of Coronary Artery Bypass Graft."—Ronald C. Hill, M.D., Morgantown.

REGISTRATION FEE—$75 for WVSMA members and $100 for non-members. Please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

OVERNIGHT ACCOMMODATIONS—Physicians should communicate directly with the Holiday Inn—Gateway. Attendees will be given a special room rate of $52 (single or double). When making reservations to obtain room accommodations, please specify that you're attending the WVSMA Conference.

ADVANCE REGISTRATION—Please complete the form below and mail to West Virginia State Medical Association, PO Box 4106, Charleston, WV 25364.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

Study Gives Early Therapy to Babies

Beach balls, squeaky toys and little swings aren't the usual apparatus found in physical therapy clinics. But in the new pediatric physical therapy room at WVU Hospitals they are a common sight.

Mary Beth Harris, Associate Professor of Physical Therapy, explained that early intervention is the key to successful physical therapy.

"The earlier we're able to start physical therapy treatment, the better a baby's chances are of leading a normal life," said Harris.

Looking for Predictors

She added that the department is currently researching and collecting data on infants to find predictors to identify babies who may have trouble later in life to insure the necessary early care to enhance development.

"It would be nice to find a couple of red flags to use as absolute predictors to point to which babies we should be treating with physical therapy," Harris said.

J. R. Simons, Adjunct Associate Professor; Susie Ritchie, Research Assistant Professor in the Department of Pediatrics, and Harris have been studying the kinds of behaviors that are exhibited in babies who turn out well and in those who have problems.

Barbara Burkart, physical therapist pediatric specialist, and Kim Vorholt, senior staff physical therapist, are providing assistance for the study.

Dr. Martha Mullett, Associate Professor of Pediatrics who directs the neonatal intensive care unit, said the therapists are conducting an in-depth research project that begins monitoring the infant's development at birth and continues to watch the baby's progress through the followup, outpatient clinic.

The study, now in its second year, will be complete in three to four years.

In treating developmentally troubled children, the therapists incorporate several exercise techniques devised in the 1950s and 1960s into an eclectic program based on developmental theory.

Teach Coordination

Beach balls are used to teach hand and eye coordination and balance to babies, as well as to develop head and neck strength.

Therapists also use a specially designed swing to stimulate motion receptors in the body. "For a child who doesn't move well, this is a way to gently introduce that experience," Harris said.

Most of the infants treated in the program are born premature and have a low birth weight. Harris explained that a large portion of the physical therapy in that stage centers on feeding—teaching the infant to eat from a bottle rather than be tube fed.

Other infants receiving pediatric physical therapy include full-term babies who sustained birth trauma or who have a known congenital problem.

Harris said the babies need to be evaluated and their problems identified before treatment begins.

Motor skills and behavioral treatments such as floor exercises are taught to the more advanced babies.

Once the baby is sent home, Burkart said, it is up to the parents to continue treatment.

Depression Relief: Is Victim Aware?

Mary, a fictitious 33-year-old secretary, has always been an optimistic person and considered herself happy, but for the last few weeks, she hasn't felt like herself.

She has no energy, doesn't want to eat, has difficulty concentrating, and finds herself crying without any reason.

As a woman, Mary is twice as likely as a man to encounter a depression episode sometime during her life.

But without knowing the symptoms or recognizing that help is available, Mary might struggle for months.

Defining depression and recognizing its symptoms is difficult, but realizing that it is treatable and seeking help are the first steps to recovery, according to Van Nickell, Assistant Professor of Behavioral Medicine and Psychiatry.

Once a depression diagnosis is made, the first step in treating the mental malady is to look for the cause.

A Loss Common Cause

The most common precipitating factor in depression is some type of loss, according to Doctor Nickell. Depression can arise from the loss of spouse, a friend or a job or can be attributed to a change in life. It can also be triggered on the anniversary of an event.

At Chestnut Ridge, the new psychiatric care unit, three basic treatments are used for depression patients: psychotherapy, medication and shock therapy.

Doctor Nickell said the treatment prescribed is determined by the cause. If the cause is not a loss or if no psychological cause is found, it is presumed that there's an imbalance in neurotransmitters in the brain.

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MU School Of Medicine News

MARSHALL UNIVERSITY

McKown Named Medical Dean

Charles H. McKown, Jr., M.D., has been promoted to Vice President and Dean of the Marshall University School of Medicine, MU President Dale F. Nitzschke announced.

Doctor McKown currently is Chairman of the school's Department of Radiology. He will succeed Dean Lester R. Bryant, who begins work at the University of Missouri-Columbia January 1. Doctor McKown already had been named Interim Dean for the period immediately following Doctor Bryant's departure.

"From the time the School of Medicine opened its doors—and even before—Doctor McKown has been one of its strongest leaders and most ardent supporters," Doctor Nitzschke said. "Certainly his associates at the medical school and in the community have the greatest respect for him.

Strong State Ties

"There's absolutely no question in my mind that he's the best person for this job," he said. "He'll be taking charge at a time we've got some real forward momentum going, and he'll be able to build on that momentum and take us even higher in serving patients, educating students, and pursuing research."

Doctor McKown's strong West Virginia ties make him an especially good choice for the post, according to A. Michael Perry, Chairman of Marshall's Institutional Board of Advisors.

"Doctor McKown is a West Virginia native, and he has in a very real way invested his life here," said Perry. "He received much of his education in our state's schools and has spent his professional career here as well..."

Doctor McKown became Professor and Chairman of radiology in 1975. In addition to his teaching and medical duties, he has headed

Charles H. McKown, Jr., M.D.

several key School of Medicine committees including the Admissions Committee, the Search Committee for a new dean in 1984, the Search Committee for a Department of Surgery Chairman, and the Steering Committee for the Medical Alumni Association.

"As anyone who knows me can attest, I have a great love for the School of Medicine," Doctor McKown said. "We've got a mission that's perhaps even more important today than it was a decade ago—to improve rural and veteran health care while educating medical students—and a group of good, dedicated people working to carry out that mission. It's a real pleasure to be able to step in and help the school move forward."

Doctor Bryant praised Nitzschke's choice of successor.

"In the three years that I have been dean, I've been very impressed with Doctor McKown's grasp of the 'big picture' surrounding our medical school," Doctor Bryant said. "He knows the challenges we face, and he's ready to meet them.

"Perhaps more than anyone else, he recognizes the tremendous contributions this school makes to the people of our state," he added. "I'm confident he will make an excellent dean."

Pharmacologist Gets Endothelium Grant

Pharmacologist Carl A. Gruetter, Ph.D, has received a grant of more than $340,000 for research on cells that help regulate the size of the lung's blood vessels.

The five-year grant from the National Institutes of Health supplements a three-year, $135,000 grant for the same purpose which ran through September 30, 1988.

Doctor Gruetter's research focuses on the endothelium, which helps blood vessels expand or constrict by releasing chemical substances, both naturally and in response to medications.

"Scientists think high blood pressure, hardening of the arteries and adult respiratory distress syndrome are associated with damage to this layer of cells," Gruetter said. "Perhaps these problems tie it to the cells' control of blood vessel size.

"No matter what causes this damage, it's important to understand the basic biological processes involved so that doctors can better keep people's bodies functioning normally," he said.

Doctor Gruetter received Marshall's Fall, 1988, Meet-the-Scholars Award for his research in this and other areas related to lung function.

"The Meet-the-Scholars selection committee was most impressed with the scope and nature of Doctor Gruetter's work," said the committee's Chairman, Dr. Christopher L. Dolmetsch. "His work has received continuing recognition from the National Institutes of Health, which has already provided significant grant support for his work.

"In addition, he acts as a consultant and reviews scientific articles for several major international journals in the field of pharmacology," he added.

Compiled from material furnished by the Office of University Relations, Marshall University.

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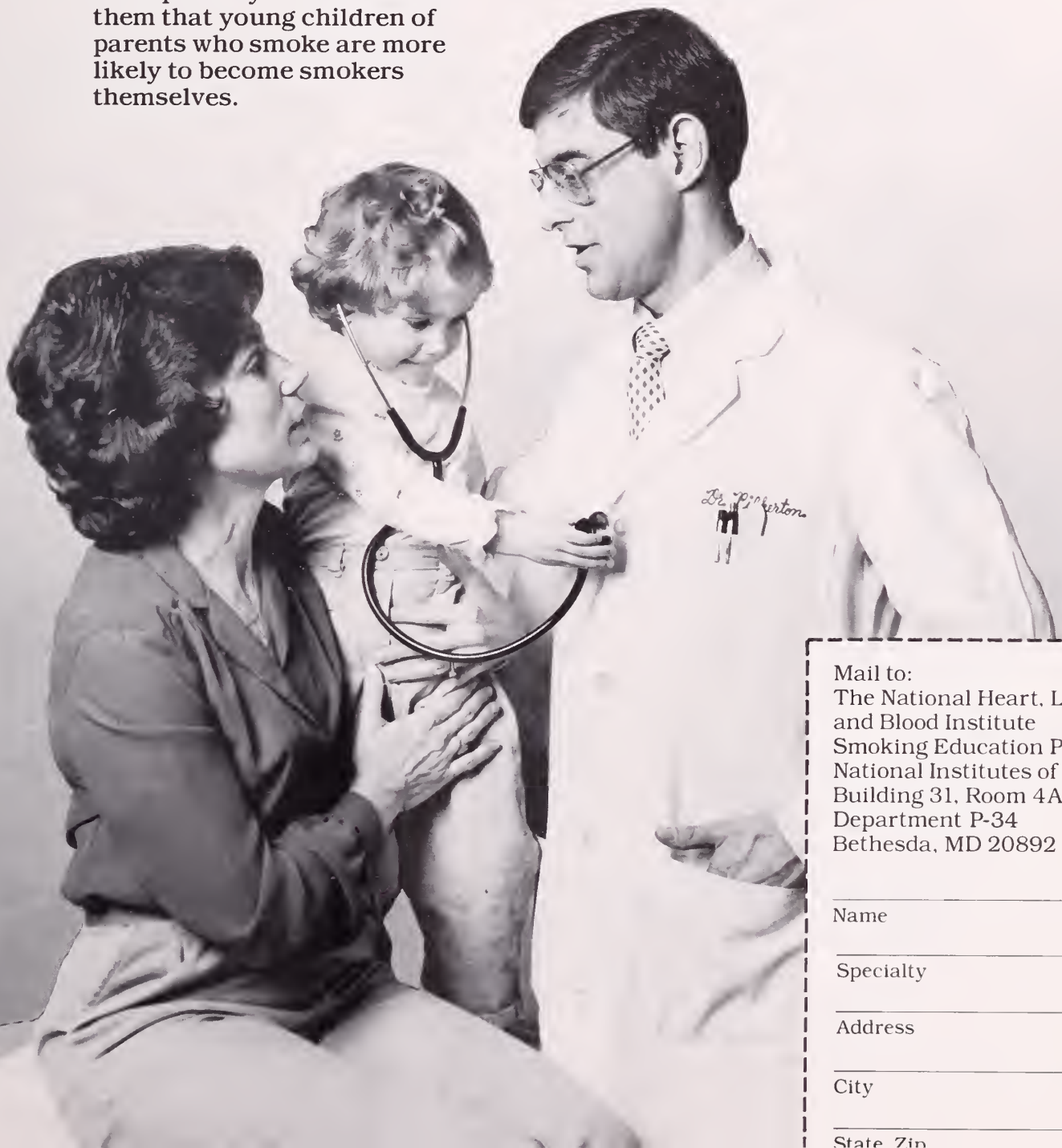

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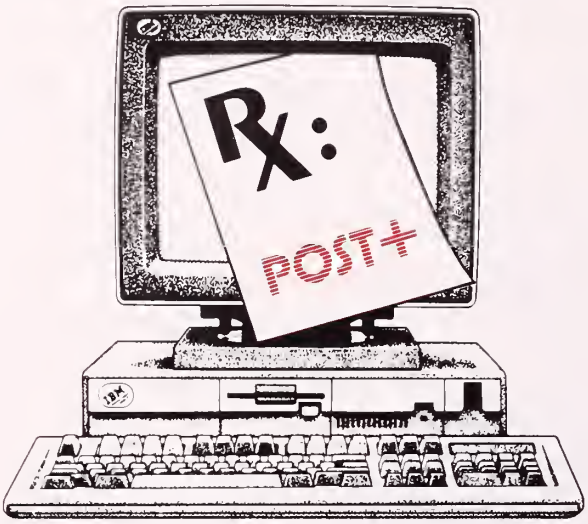

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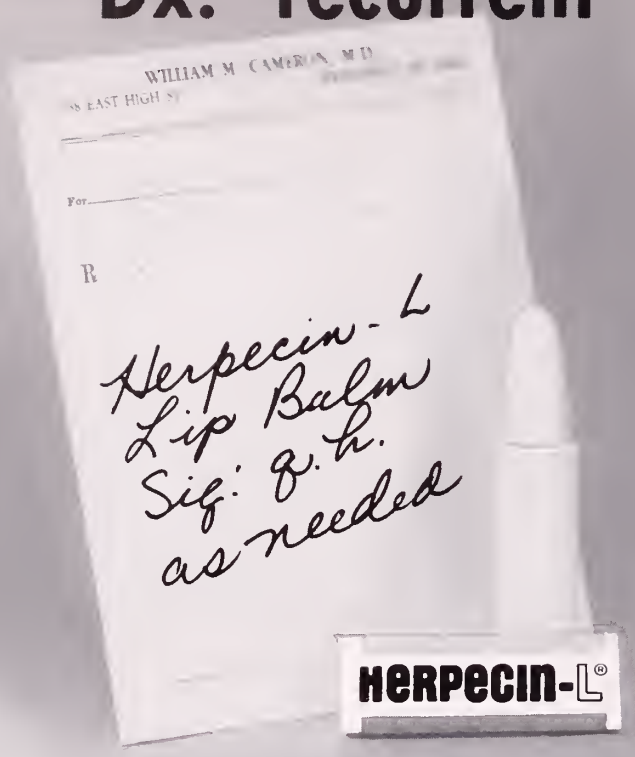

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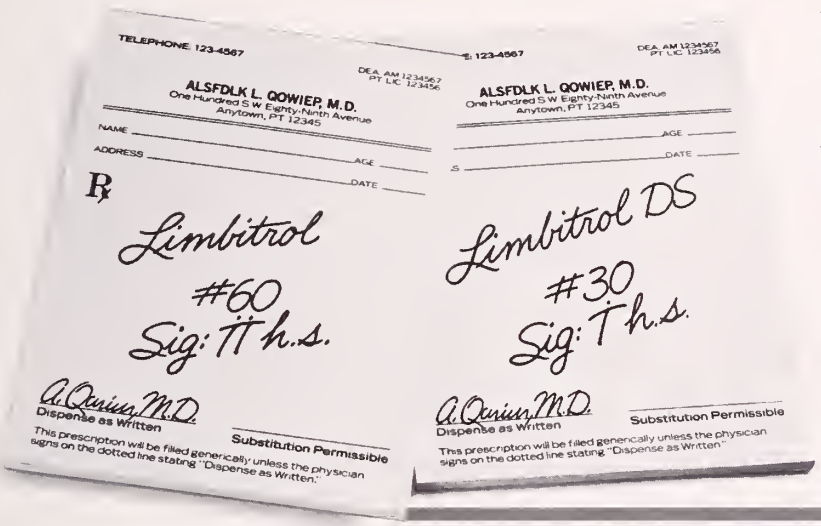

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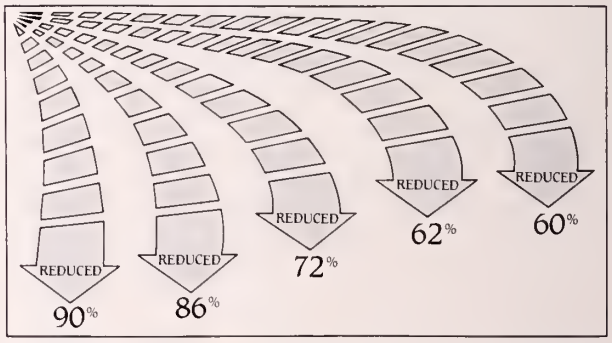

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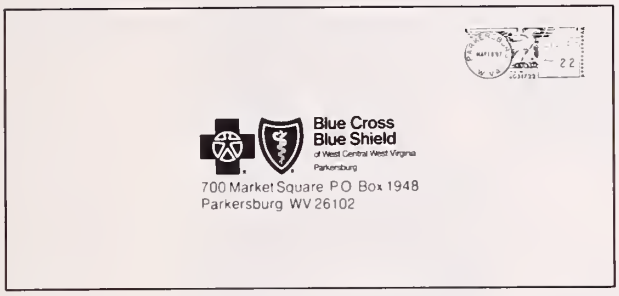

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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USPS 676 740
ISSN 0043 - 3284

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Ruptured Abdominal Aortic Aneurysm: The Persistent Challenge

THOMAS R. RIGGS, M.D.
Chief Surgical Resident, Department of Surgery, West Virginia University School of Medicine, Morgantown

DONALD E. McDOWELL, M.D.
Associate Professor of Surgery and Chief of Vascular Surgery, WVU School of Medicine, Morgantown

Despite improvement in anesthetic and postoperative care, ruptured abdominal aortic aneurysms (AAA) continue to have a high mortality. Thirty-three patients from 1980-1986 underwent surgery at West Virginia University for ruptured AAA, with 12 survivors (36.4 per cent). Age, use of MAST trousers, initial hemoglobin and blood pressure as well as operative time and estimated blood loss were not found to be significantly different between survivors and non-survivors. The blood pressure at the time of induction, during surgery, at the end of surgery, and the final temperature were significantly different.

Our results show that the chance of survival is much greater if the patient responds to the initial fluid resuscitation prior to induction, and if blood pressure and temperature are maintained during the operation.

Introduction

Ruptured abdominal aortic aneurysms (AAA) are a catastrophic and frequently terminal endpoint of the atherosclerotic process. The first elective aneurysmectomy in 1952 by Dubost (1) was soon followed by the repair of a ruptured AAA by Gerbode in 1954 (2). While the mortality of an elective aneurysm repair has decreased over the last 30 years to less than five per cent in most series, the mortality of ruptured AAAs has remained in the range of 50 per cent (3, 4, 5). Even more disappointing is evidence that the number of AAAs and, hence, ruptured AAAs is increasing (6). A recent increase in the number of ruptured AAAs at West Virginia University Hospital stimulated a retrospective review of the cases during the past six years.

Methods

The charts of all patients with the diagnosis of ruptured AAAs from 1980-1986 were reviewed retrospectively. Those patients undergoing surgery at an outside hospital and transferred for care of postoperative complications were excluded. Table 1 demonstrates a flow sheet used to evaluate each patient. Although there was interest in the time from first symptoms to diagnosis and from diagnosis to surgery, the urgency and life-threatening condition of the patient frequently precluded accurate documentation of time intervals. Data were subjected to an unpaired T-test or Chi-square test when appropriate.

"The blood pressures at the time of surgery, during surgery, and at the end of surgery as well as the final body temperature were found to be significantly different in the survivor and non-survivor groups"

Results

From 1980 through 1986 there were 35 patients who either presented or were transferred to West Virginia University Hospital with the diagnosis of ruptured AAA. There were 26 males and nine females. One patient refused surgery and one patient had no vital signs for a prolonged period of time in transport and was pronounced dead in the emergency room. Therefore, there were 33 patients who had surgery. There were 12 survivors (36 per cent). The average age was 74 years, ranging from 62 to 86 years. The average age of survivors was 71.8, and the average age of nonsurvivors was 75.1 ($p < .06$). Table 2 lists the number of ruptured aneurysms per year from 1980-1986, showing a recent trend toward increasing incidence.

The significance of the use of MAST trousers, and of initial hemoglobin and blood pressure determinations was evaluated with respect to survival. MAST trousers were used on three of 10 survivors. It was not known whether or not MAST trousers were used on two

TABLE 1
Flow Sheet Used for Each Patient Evaluation

NAME: HOSP. #
DATE OF OPERATION:
AGE:

Pre-Op: Use of MAST Trousers
Initial Hb
Initial BP

Intra-Op: Operative Time
Initial BP
Lowest BP
BP at end of operation
Estimated Blood Loss
Initial and Final Temperature

Type of aortic control (clamp vs. Foley)
Free blood present (Yes or No)

Died: Yes or No

Cause of Death:

Complications if survivor:

survivors. Thirteen of 21 non-survivors had MAST trousers ($p < .09$). The initial recorded systolic blood pressure averaged 89.5 mm Hg in survivors and 83.55 mm Hg in non-survivors ($p < .34$). The initial hemoglobin averaged 11.5 gms per cent in survivors and 10 gms per cent in nonsurvivors ($p < .06$). The initial average systolic blood pressure in the operating room after fluid resuscitation was 125.4 mm Hg in survivors and 92 mm Hg in nonsurvivors ($p < .005$). Eight patients died in the operating room, and they were excluded from intra-operative calculations.

The lowest average systolic blood pressure recorded during the operative procedure was 77.1 mm Hg in survivors and 62.7 mm Hg in non-survivors ($p < .04$).

The average blood systolic pressure at the end of the procedure was 125 mm Hg in survivors and 98.8 mm Hg in non-survivors.

The average length of the procedure was 221.6 minutes in survivors and 216.5 minutes in non-survivors ($p < 0.4$) (patients who died in the operating room were excluded).

The average estimated blood loss (EBL) was 5650 cc. in survivors and 6685 cc. in non-survivors ($p < .25$) (patients who died in the operating room were excluded).

The average initial body temperature in the operating room was 34.9 ° C in survivors and 33.8 ° C in non-survivors ($p < .15$). The final intraoperative body temperature was 34.25 ° C in survivors and 32.8 ° C in the non-survivors ($p < .05$).

TABLE 2
Number of Ruptured Abdominal Aortic Aneurysms Per Year

YEAR	RUPTURED ANEURYSMS NUMBER
1980	4
1981	5
1982	2
1983	2
1984	6
1985	6
1986	10
Total	**35**

TABLE 3
Primary Cause of Death in Non-Survivors

PRIMARY CAUSE OF DEATH	
Hemorrhage	11
Myocardial Infarction	5
Respiratory	2
Sepsis	2
Arrhythmia	1

In the survivors the aorta was controlled by direct clamping in three patients, and by an intra-aortic Foley catheter with a 30-cc. balloon in five patients; the method of control was not known in four patients. In the non-survivors the method of control of the aorta was by direct clamping in eight patients, by intra-aortic Foley catheter in nine patients, and unknown in four patients ($p < .6$).

Free blood in the peritoneal cavity was present in four of 11 survivors (unknown in one) and in six of 19 non-survivors (unknown in two patients) ($p < .07$).

There were 21 deaths, eight of which occurred in the operating room. The primary cause of death is shown in Table 3. Complications in the survivors are listed in Table 4.

Discussion

During the period from 1980 to 1986, 33 patients underwent surgery at West Virginia University for a ruptured AAA, with 12 survivors (36 per cent). Our data support a rising trend in the number of ruptured AAAs, as also shown by others (6), and demonstrated an interesting increase in presentation during December and January. Age was not found to be significantly different between survivors and non-survivors in this series, but has been found to be significant in other series (8, 9).

Initial blood pressure in the emergency room has usually been found to be significantly different between survivors and non-survivors (7, 10), but was not found to be of significance in our group of patients. Initial hemoglobin difference has also been found to be of significance by some (7), but it was not significantly different in this series.

TABLE 4
Complications of Survivors

None	4
Renal Failure	2
Arrhythmias	2
Embolism	2
Bleeding	2
Resp. Insufficiency	2
Fasciotomy	1
Paraparesis	1
Dic	1
Septic Thrombophlebitis	1
Pancreatitis	1

The use of MAST trousers has previously been shown to benefit survivors, but was not found to be a significant factor in our series.

The blood pressure at the time of anesthesia induction was found to be highly significant. This has been shown also by Donaldson (5), and it demonstrates the importance of the period between initial presentation and induction. The patients who responded to fluid resuscitation (and probably had a contained rupture prior to surgery) had a much higher survival compared to those who remained persistently hypotensive. This trend continued in the operating room. There were eight operating room deaths. These patients were excluded in determining significant differences between survivors and non-survivors when looking at lowest blood pressure during and at the end of the procedure because it would automatically be zero. They were also excluded in considering the length of the operation since some died very early in the procedure.

Also excluded were the estimated blood loss determinations, since some patients may have had an artificially low estimated blood loss when they died early during the procedure.

Non-survivors had a lower blood pressure during the procedure compared to survivors. This was also shown by Wakefield (7). The average blood pressure at the end of the procedure was also significantly lower in non-survivors when compared with survivors.

Other Factors, Causes of Death

When operating room deaths were excluded, the length of the procedure and the estimated blood loss had no bearing on the outcome. Estimated blood loss has

been found by others to be a significant factor between survivors and non-survivors (7, 10) as has the length of the procedure (7). The presence of free blood has been shown to be highly significant by Fitzgerald (11) but not by Lawrie (10), and it was not shown to be significant in this series. Whether aortic control was obtained by direct clamping or with a 30-cc. balloon Foley catheter was not found to be significant.

Consistent with most studies, hemorrhage, persistent hypotension and myocardial infarction were the most common causes of death (7, 10). Two of our patients died of sepsis (one after 161 days), both from acute cholecystitis. Among the survivors, four patients had no complications while the other seven had 19 complications (excluding the patient who died after 161 days), which is similar to other studies (6). Of note among the survivors was that there were no myocardial infarctions.

The importance of rapid transfer to the appropriate facility and rapid transport from the emergency room to the operating room cannot be over-emphasized. Acceptable data demonstrating the time of diagnosis to transfer to the area medical center and the time of transfer from the emergency room to the operating room could not be found. Most of our patients (23 of 33) were transferred from other facilities, and helicopter transport is always used when available. When the reported diagnosis is a ruptured AAA from a transferring facility, our patients in general are taken directly to the operating room without stopping in the emergency room. Stopping in the emergency room only delays definitive care. If the diagnosis is in question, it is safer to make that determination in the operating room than wasting valuable time in the emergency room.

Hypothermia a Problem

Another area of importance rarely mentioned in published reports is the patient's temperature during the procedure. The average initial temperature was 33.8 in non-survivors and 34.9 in survivors, which was not significant. The average final temperature was 32.8 in non-survivors and 34.3 in survivors, which was statistically significant. Frequently the temperature has been even lower during the procedure. Hypothermia has been shown to cause platelet sequestration (13) and to cause platelets to be less effective. Hypothermia during the procedure has been difficult to reverse even with warming blankets and intra-abdominal irrigation with warm saline. This hypothermia was felt frequently to contribute to excessive blood loss.

Eight patients died in the operating room and three died within two hours of leaving the operating room. Six of these 11 patients died of persistent blood loss secondary to a consumptive coagulopathy in which a low body temperature and massive transfusions were felt to be contributing. We encourage the use of warmed intravenous fluids, warming mattresses and blood transfusion warmers, all of which we have available in the operating room.

"The average final temperature was 32.8 in non-survivors and 34.3 in survivors, which was statistically significant."

Some interesting deaths occurred for various reasons. One patient was told his aneurysm was too amall to need operation. One patient with a known AAA ruptured the night after a cardiac catherization. One patient refused elective repair. One refused both elective repair and repair at the time of rupture. One patient ruptured on another service after admission for a different diagnosis. One ruptured two weeks after a laparotomy for small bowel obstruction.

Conclusion

Thirty-three patients have undergone surgery for ruptured AAAs from 1980 to 1986 at West Virginia University. There were 12 survivors. The age, use of MAST trousers, initial hemoglobin, initial blood pressure and temperature were not found to be of significance in comparing survivors and non-survivors. The blood pressures at the time of surgery, during surgery, and at the end of surgery as well as the final body temperature were found to be significantly different in the survivor and non-survivor groups. The length of the procedure and the estimated blood loss were not significantly different in survivors and non-survivors. The initial blood pressure response of the patient after early fluid resuscitation and maintenance of adequate body temperature appear to be the best predictors of survival. Ruptured abdominal aortic aneurysms continue to be a challenge for all vascular surgeons.

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Eight Years' Experience at WVU

Methotrexate Therapy In Rheumatoid Arthritis

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Rheumatoid arthritis (RA) is a common disease with a significant economic and social impact on Americans. Many patients with RA are unresponsive to or intolerant of conventional therapy or the limited therapeutic options available. For many of those patients, immunosuppressive drugs have been the mainstay of therapy. Our experience with methotrexate for these patients indicates that this drug provides symptomatic relief and improvement in objective parameters. Significant toxicity was uncommon. Methotrexate should be considered for selected patients with severe rheumatoid arthritis when conventional measures have been ehxausted.

Rheumatoid arthritis (RA) affects nearly one per cent of the American population at a cost of approximately one billion dollars a year (1). In addition to the basic program of physical measures, rest, aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs), the mainstay of medical treatment for these patients has been a group of "remission-inducing" or "disease-modifying," anti-rheumatic drugs. These include D-penicillamine (Cuprimine, Depen), anti-malarials and gold compounds (2, 3).

Despite decades of experience with these drugs, reliable information is not available concerning their modes and durations of action or the numbers of patients experiencing protracted "remissions" following their use (3). For example, in series of patients treated with gold, remission rates between zero (4) and 79 per cent (5) have been reported. In addition, less than 50 per cent of patients treated with intramuscular gold are able to continue to receive it after four or five years (6, 7). Most commonly, patients have discontinued intramuscular gold because of mucocutaneous toxicity and lack of efficacy.

Because of lack of efficacy or the occurrence of drug toxicity in many patients with RA, there is a need of another type of treatment beyond these classical, widely accepted measures. Cytotoxic drugs were first used to treat rheumatoid arthritis in the early 1950s (8), but the publication of data from large controlled trials of crysotherapy (9) and the introduction of corticosteroids (10) dampened any initial enthusiasm for the use of cytotoxic drugs in RA. In the 1970s, though, interest in cytotoxic drugs reappeared for patients unresponsive to or intolerant of conventional therapy.

"Methotrexate should be considered for selected patients with severe rheumatoid arthritis when conventional measures have been exhausted."

All the currently available cytotoxic drugs have the potential for significant long- and short-term toxicities. Azathioprine (Imuran), the only Food and Drug Administration (FDA)-approved cytotoxic drug for RA, has not been shown to prevent erosions (11). In addition, it increased the incidence of malignancy in transplant patients who received it as an immunosuppressant (12). This observation may not pertain to patients with RA (13), but the fear of induction of a malignancy subsequent to long-term use has made many rheumatologists and their patients fearful of azathioprine. The alkylating agents, especially cyclophosphamide, have also been used in rheumatoids though they are not approved by the FDA. Cyclophosphamide (Cytoxan) is a very potent immunosuppressive drug and has been shown in some patients to have the ability to heal erosions (14). It also clearly has the potential for life-threatening toxicities including the development of hemorrhagic cystitis, bladder cancer (15) and other malignancies as well as the infectious, hematologic, pulmonary and mucocutaneous problems seen with all of these drugs (16).

The problems associated with these drugs undoubtedly have contributed to the widespread use of methotrexate (MTX) for RA in the United States (17) despite the lack of FDA approval for this indication (18). Though it is not carcinogenic, MTX may also have significant toxic effects (12).

Methods-Patients

This study includes data from patients treated with MTX at the West Virginia University Hospital and outpatient clinics between 1980 and 1987. Data were abstracted from inpatient and outpatient records for computer entry from 96 patients (65 women and 31 men) with classic or definite RA as defined by the 1958 revision of the Criteria for the Diagnosis of Rheumatoid Arthritis (19). All patients were 18 years of age or older at the time of entry and had had rheumatoid arthritis for over six months with onset after age 16. Their arthritis was incompletely controlled with individualized doses of NSAIDs and/or salicylates. Nearly all either had failed to respond to intramuscular gold salts (up to a dose of one gram) and/or D-penicillamine (at doses over 500 mg a day for six months) or had developed toxicity from these agents. At entry, 54 per cent of patients were also taking small doses of corticosteroids, equivalent to 10 mg of prednisone a day or less.

The single criterion for entry into this study was a lack of response to

conventional therapy. Medical records were also reviewed for evidence of the following indicators of disease activity: (1) Westergren sedimentation rate over 28mm/hr, (2) greater than 45 minutes of AM stiffness, (3) greater than six painful joints, and (4) greater than three swollen joints. Eighty-seven per cent of the patients in this study fulfill three or four of these criteria at entry, and all fulfill at least two. These patients are a subset of the patients that we have treated with RA whose records were carefully reviewed as part of a prospective study of the hepatic effects of this drug (20).

Clinical Methods

The initial assessment consisted of a complete history and physical examination. Patients were questioned regarding duration of their disease and morning stiffness, prior therapies and general physical capabilities. The American Rheumatism Association classification was used to classify disability with: Class 1-normal; 2-mild disability; 3-limited disability; and 4-wheelchair or bedridden (21). A global assessment was made from review of the available information from the physician and patient comments in the chart and given a score of: 0-asymptomatic; 1-mild; 2-moderate; 3-severe; and 4-very severe.

Treatment

Therapy was initiated with 7.5 to 10 mg of oral methotrexate once a week. Patients were all instructed to take their medication all at once with food at the same time every week and not to consume alcohol. At the physician's discretion, the dosage could be increased by 2.5 mg every six to eight weeks with insufficient response and no serious toxicity. The usual maximum was 25 mg a week. The mean stable dose, defined as the weekly dose maintained for four months without change, was 15 mg/wk. The mean cumulative dose by the time a stable dose was reached was 672 mg (approx. 40 weeks). The mean cumulative dose at the time of the first post-treatment liver biopsy was 1547 mg (approximately two years). Patients received individualized doses of salicylates and/or NSAIDs during the study. With few exceptions, patients continued these throughout the study. Clinical assessment of disease activity at-followup visits generally included a joint examination, questioning about disease activity, and other studies as clinically indicated. At each visit patients were questioned directly about toxicity, reminded not to drink alcohol, and had a CBC, smear platelet estimate or platelet count performed. When only platelet estimates were done, and for the purpose of calculation, a value of 200,000 per cubic mm was considered to define an estimate of "adequate."

Patients were seen at four- to 12-week intervals, making strict point-point comparisons at all times difficult. For the sake of simplicity though, and to insure that each patient truly served as his/her own control, incomplete pairs of data were not used. Westergren sedimentation rates (ESR), BUN, serum creatinine, albumin, urinalyses, SGOT and alkaline phosphatase were done whenever they were clinically indicated and usually within one week of admission to the hospital for a liver biopsy or at other milestones such as when the patient reached a stable dose.

TABLE 1
Patient Characteristics at Entry[a]

Mean age (yrs)	53
Female/male	65/31
Mean duration (yrs)	9.9
Prior IM gold (%)	88
Prior D-penicillamine (%)	58
Prior corticosteroids (%)	54
Prior ASA (%)	76
Prior NSAIDs (%)	79

a: n=96

TABLE 2
Disease characteristics[a] Before and During Methotrexate

	Before	*After*	n^b	*p*
Mean AM stiffness (mins)	268	65	77	<0.005
Mean ESR mm/hr	61	35	41	<0.01
Global assessment	2.7	1.2	87	<.001

[a]mean values
[b]number of pairs of data available for comparison

TABLE 3
Changes in Hematology Values[a]

	Before	*After*	n^b	*p*
WBC $10^3/mm^3$	8.1	7.5	84	<0.01
Hgb mg/dl	12.7	13.4	82	<0.001
Platelets $10^3/mm^3$	303	271	82	<0.002
MCV femtoliters	82.6	90.8	76	<0.001

[a]mean values before and after methotrexate treatment
[b]numbers of pairs of data available for comparison

Results

The values for demographic characteristics at entry are presented in Table 1. Table 2 presents disease characteristics before and after MTX therapy. Post-treatment evaluations were done when a stable dose was reached or at the time of the first post-MTX liver biopsy, whichever was later in the course. Prior to treatment, the average patient was a middle-aged woman with more than three hours of morning stiffness, an elevated sedimentation rate, and an ARA class of two and a global assessment of nearly three indicating limiting disability. After treatment there was significant improvement in ERS, global assessment and duration of AM stiffness.

In Table 3 we compared laboratory values before and after MTX treatment. The time of the post-treatment evaluation is as in Table 2. The mean white count and platelet count fell significantly but remained within the normal range while hemoglobin and MCV increased. Mean values for the ratio of neutrophils to lymphocytes in the peripheral blood, BUN, creatinine, SGOT, total bilirubin, alkaline phosphatase and albumin remained within the normal range. Occasional patients had elevated (less than two times normal) SGOT or bilirubin before or during MTX therapy. With rare exceptions, though, these elevations were not seen in the same patients and returned to normal despite continuing the medication.

Several of our patients discontinued therapy. Approximately one half stopped MTX at least once, albeit usually briefly, because of one or more toxicities. Between two and four per cent stopped MTX because of rashes, alopecia, anemia, thrombocytopenia or infection. Stomatotis (20 per cent), nausea (16 per cent) and leukopenia (18 per

cent) caused brief discontinuations of therapy more often. Several times leukopenia was seen at the time of deteriorating renal function, probably because MTX undergoes a renal elimination (24). Two patients taking steroids concomitantly developed herpes zoster. A 56-year-old man, also taking corticosteroids, developed progressive multifocal leukoencephalopathy. MTX was stopped in seven cases of bacterial infections including pneumonia, urinary tract infection and endocarditis. One man with a long smoking history developed carcinoma of the lung. A male octogenarian developed a primary brain tumor. Four per cent of the patients in this series discontinued therapy because of a lack of response after a stable dose was reached.

Four patients had discontinued MTX because of abnormalities on post-treatment liver biopsies. One of these developed hepatitis B and encephalopathy, and on biopsy was found to have some fibrosis but clinically was felt to have cirrhosis. Another patient was found to have micronodular cirrhosis on a post-treatment biopsy; blind retrospective review of her pretreatment biopsy by a hepatologist and a gastrointestinal pathologist suggested that she had mild cirrhosis even before methotrexate therapy. In one instance methotrexate was discontinued because of the development of a very severe fatty liver. In another instance MTX was discontinued over the patient's objections after the asymptomatic development of moderate portal fibrosis after approximately 4.5 grams of MTX.

The numbers of patients with subcutaneous nodules did not appear to change during the course of treatment though we have seen nodules become more numerous, enlarge, and ulcerate in several patients treated with MTX. Twenty of these patients were able to discontinue corticosteroids while 10 patients began corticosteroids during methotrexate therapy ($p < 0.05$ by Sign test).

Discussion

Though minor cases of toxicity were very common in our patients, this study demonstrated that MTX can be given over several years with a very reasonable margin of safety to selected patients with severe RA. Approximately 50 per cent of our patients stopped MTX at least once because of toxicity but in most of these instances patients could resume it after one or two weeks. This figure is similar to the instance of minor toxicity reported by Gispen et al. (25). The most common reasons for stopping MTX were stomatitis and nausea. We have not encountered pulmonary toxicity in the patients in our study nor in the 100 other patients with connective tissue diseases whom we have treated with MTX during the last 10 years.

A number of other controlled (26) and open (24) studies have confirmed the long- and short-term efficacy of MTX on measures of rheumatoid arthritis activity. It is also being used in Reiter's disease, sarcoidosis, myositis and, perhaps most interestingly, ascending cholangitis (24, 27).

In this review of our RA patients' records there were statistically significant improvements in ESR, morning stiffness and global assessment as well as slight increase in hemoglobin. Platelet counts and WBC also fell slightly, perhaps related to drug effects or disease improvement as platelets are often elevated in severe, active RA. Twice as many of our patients were able to discontinue steroids as began them during MTX therapy, and many others have been able to discontinue salicylates and NSAIDs altogether.

Placebo-controlled data are not available to indicate whether this drug has the ability to prevent erosions, though, as with cyclophosphamide (14), there are reports of healing of erosions during MTX therapy (28). Clearly, there is a need for more studies of MTX in patients with radiographically and clinically early RA to answer this question.

In our chronic and severe RA patients, MTX provided at least symptomatic relief for several years. MTX did cause adverse side effects, although severe toxicity was uncommon. Toxicity not withstanding, given the alternatives for patients with aggressive RA unresponsive to or intolerant of conventional therapy, the role of MTX in the treatment of many of these patients has been widely accepted by rheumatologists. Until other agents are found, it will probably continue to play a role in the management of many patients with severe RA.

(Since the submission of this manuscript, MTX has been approved by the Food and Drug Administration (FDA) for treatment of rheumatoid arthritis.—J.E.B.)

Generic/Trade Names

Generic drugs (with trade names in parentheses) mentioned in this article are azathioprine (Imuran), cyclophosphamide (Cytoxan) and D-penicillamine (Depen, Cuprimine).

Acknowledgements

We would like to acknowledge the secretarial help of Ms. Cindy Holbert, and the many physicians who let us see their patients.

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Medical Grand Rounds

West Virginia University Health Sciences Center

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Management of Carcinoma of the Esophagus

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The majority of patients with esophageal carcinoma present with dysphagia. The selection criteria and the staging of patients for potential curative resection as well as endoscopic therapeutic options for palliation of this symptom are discussed. The West Virginia University experience has included 14 cases treated with surgical resection and 20 cases treated with laser photoablative therapy. Concurrent radiation and/or chemotherapy have been used in many of the patients.

Of the 9,000 new cases of esophageal carcinoma diagnosed in the United States each year (1), 80 per cent will present with dysphagia. Three per cent also have regurgitation, and 13 per cent, pain. Later an additional 10 per cent will develop dysphagia, 20 per cent regurgitation, and 22 per cent pain (2). Since the major symptom in 90 per cent of these patients will eventually be dysphagia, surgical or endoscopic therapy must address this problem.

Ninety-five per cent of these cases are squamous cell carcinoma (1) followed by primary adenocarcinoma of the esophagus in approximately three per cent of cases. Other cell types which are noted much less frequently are adenosquamous carcinoma, oat cell carcinoma, sarcoma, and malignant melanoma (3). Metastatic disease and extrinsic compression will also occasionally cause esophageal obstruction requiring palliative procedures; however, these lesions do not usually lend themselves to surgical therapy.

Survival is poor, with an average survival of three months in untreated cases. If curative resection is possible, median average survival is increased to 29 months. Following curative resection, five-year survival is eight per cent in upper thoracic lesions and 17 per cent in lower thoracic lesions (2). It is therefore important to stage patients correctly to determine whether they are candidates for curative resection. Findings that limit curative resection are invasion into surrounding structures such as the trachea, bronchus, hilum, pericardium or aorta. Metastatic involvement of local lymph nodes does not interfere with palliative resection but does preclude a curative resection (2).

Preoperative Staging

Pre-operative staging consists of barium swallow, upper endoscopy, bronchoscopy, CT scan of the chest and, in some laboratories, endoscopic ultrasound. Barium swallow permits determination of the esophageal axis and length of the lesion. If there is no shift in axis such as esophageal lumen tortuousity, angulation, or deviation, a resection is possible in 81 to 90 per cent of patients (4). In Postlethwait and Sealy's series of 701 patients with esophageal carcinoma undergoing surgery, a lesion less than or equal to four cm in length could be resected 45 per cent of the time, and a five- to seven-cm lesion 40 per cent of the time, while the resectability of lesions seven to eight cm was 18 per cent; in patients with lesions greater than 10 cm it dropped to two per cent (2). It is therefore important to determine that the length of the lesion is less than seven cm if curative resection is entertained.

The measurement of the length of the stricture as determined by a barium swallow is sufficiently accurate (5) unless high-grade obstruction to barium flow is present. In this situation the distal margin is difficult to determine unless measured by endoscopy. Endoscopy will also provide histologic confirmation of the lesion. Using computed tomography, mediastinal invasion can be predicted accurately in 82 to 100 per cent of cases in mid and proximal esophageal lesions (6). Aortic invasion can be predicted in 55 to 100 per cent of cases (6).

The value of computerized tomography is limited when evaluating lesions in the distal esophagus

because the tissue planes, which are already difficult to define in healthy patients, are even fainter in the cachectic esophageal carcinoma patient. The CAT scan is also very poor for prediction of metastatic lymphadenopathy in the chest.

Newly developed endoscopic ultrasonography improves diagnostic accuracy compared to computed tomography or external ultrasonography by its ability to bring a high-frequency, ultrasonic beam close to the target lesion via an upper endoscope. Using this technique, a high-resolution view of the esophageal wall is visualized as a five-layer structure. Since the fourth layer corresponds to the muscularis propria and the fifth layer to adventitia, transmural involvement by tumor or invasion into adjacent structures can readily be defined. One can also identify lymph nodes neighboring the esophagus that are less than five mm in diameter since the two-point resolution of the endoscopic ultrasound is approximately 0.2 mm. Unfortunately, there is no single characteristic allowing complete discrimination between malignant and inflammatory nodes, although malignant nodes tend to be larger and present in clusters.

In the 55 patients with esophageal carcinoma staged by Lok Tio utilizing endoscopic ultrasound(7), this technique correctly staged 10 of 11 cases which proved to be non-resectable at surgery. The one case that was not correctly staged was an incomplete examination since the endoscope could not be introduced through the malignant stricture. Of 44 patients who were either locally or palliatively resectable, endoscopic ultrasound correctly staged 37. Six of the missed cases had lymph nodes that were incorrectly identified as either inflammatory or metastatic, based on the number and size of the lymph nodes noted. No lymph nodes were missed. The endoscopic ultrasound was as accurate with lesions involving the distal esophagus and gastric cardia as it was with mid-esophageal lesions.

This technique provides more accurate staging of resectability than CAT scan of the chest; however, if lymph nodes are noted, one cannot discriminate whether the lesion is locally or palliatively resectable. Resectability is also somewhat dependent upon location of the lesion since the percentage of lesions which can be resected is lower in the cervical and mid-esophagus than in distal lesions (2). We recommend surgery in patients with lesions that are six cm or less in length that do not have evidence of metastatic disease or mediastinal involvement. We also tend to recommend surgery in more patients that have distal disease, and are more liberal when applying the length of the lesion criteria when a distal lesion is found.

Surgical Therapy

The first successful resection of an esophageal carcinoma was performed by Czerny in 1877 (2). A cervical esophageal carcinoma was removed and the patient was fed through a distal cervical esophagostomy. The patient lived for 15 months (8). The first intrathoracic esophagectomy was performed by Torek in New York; the cervical esophagostomy performed was connected to the stomach by a rubber tube (9). In 1938, Adams and Phemister reported the first transpleural esophagectomy followed by esophagogastrostomy performed through a left thoracoabdominal incision (10). This initiated the modern area of esophageal resection with immediate reconstruction.

Although carcinoma of the esophagus may occur de novo, premalignant lesions of the esophagus include: Plummer-Vinson syndrome, lye stricture, Barrett's esophageal metaplasia, long-standing achalasia, non-tropical sprue, and diverticula of the esophagus (11). Carcinoma of the esophagus may present clinically as dysphagia, total obstruction, malignant tracheoesophageal fistula or perforation. Malignant tracheoesophageal fistulae and perforation may require emergent or urgent surgical procedures such as bypass or esophagastrectomy if the perforation is recognized early. Medical therapy may be necessary in certain cases.

For the patient with uncomplicated esophageal cancer, the operative approaches may include a left thoracotomy, a right thoracotomy-abdominal approach, or a transhiatal-cervical approach. Laparotomy allows one to evaluate the celiac lymph nodes, the liver, and other abdominal organs. If extensive metastases are present, which were not apparent on preoperative evaluation by CAT scan, one may not want to proceed with an aggressive, curative resection but simply perform a palliative resection. Patients with middle-third esophageal lesions should always be evaluated by bronchoscopy as well as CAT scan and esophagoscopy preoperatively to evaluate the tracheal and esophageal anatomy. Extensive resection

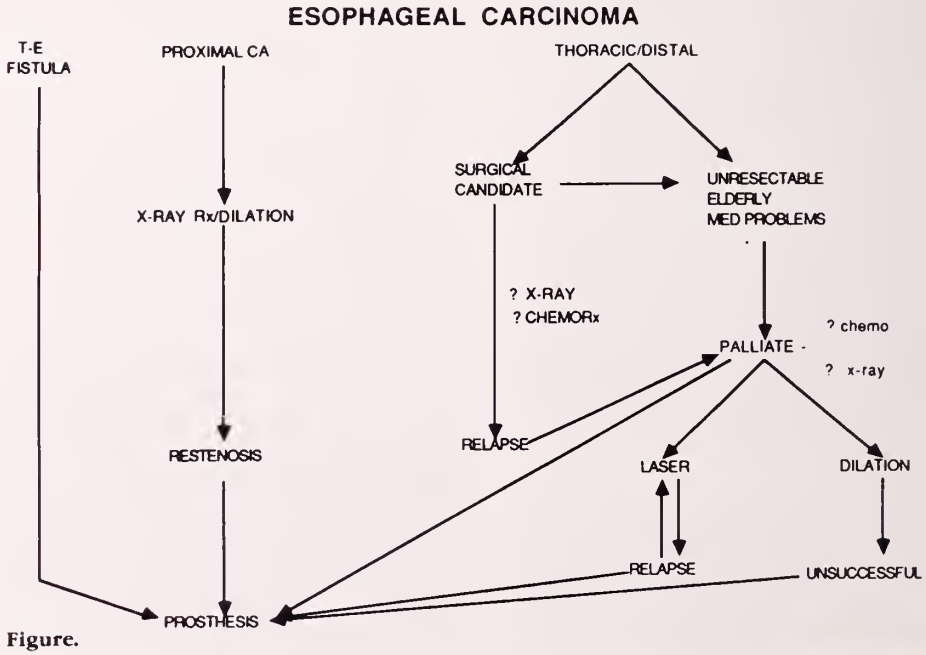

Figure.

involving the lung, main stem bronchi or trachea should be avoided.

Although all three surgical approaches to esophageal carcinoma have been utilized at West Virginia University, one personal preference (RH) is the right thoracotomy-abdominal or Ivor-Lewis approach (12). Reconstruction is generally accomplished utilizing the stomach, although we have used colon and small bowel as well. For proximal esophageal carcinoma, free jejunal interposition grafting may be very useful. Over the last three years, 14 esophagogastrectomies have been performed (RH) utilizing stomach and colon for reconstruction. There was one postoperative death secondary to a myocardial infarction at 48 hours and no esophagogastrostomy leaks. There have been five late deaths. Of the 14 carcinomas, nine were adenocarcinomas. Of the late deaths, all but one had positive metastatic nodes. At the time of the initial resection, the one who had no nodal metastasis was an adenoid cystic carcinoma of the esophagus which was resected in October, 1985, with survival until October, 1988.

Combined Modality Therapy

Recently a resurgence of chemo and radiation therapy has occurred. In 1981, Steiger and associates reported their results from Wayne State University in Detroit, Michigan. They originally utilized 5-fluorouracil and Mitomycin C from 1977 to 1979. After December, 1979, Cis-platinum was substituted for Mitomycin C. Radiotherapy (3,000 rads) was begun at the same time as the chemotherapy. The esophagectomy was performed three to four weeks after the preoperative chemo- and radiotherapy. All carcinomas were squamous-cell carcinoma. Of the 48 patients who had an esophagectomy, 15 had no tumor in the resected specimen, and 11 of these were alive with no evidence of disease at the time of their report (13).

In 1986, Wolfe and associates reported their results with combined-modality therapy for carcinoma of the esophagus. Seventy-four patients with carcinoma of the esophagus were evaluated with 52 having squamous-cell carcinoma and 22 having adenocarcinoma. The patients with the squamous-cell carcinoma received Cis-platinum and VP-16, and those with adenocarcinoma received Cis-platinum and 5-FU plus 4,500-6,000 rads preoperatively. Twenty-nine patients completed the combined-modality regimen and underwent esophagogastrectomy. Of these, 25 were alive at the time of the report. There were no operative deaths, and one patient died at nine months of a stroke. Three others had recurrence, and one died after surgery. Of the 29 patients who completed the integrated therapy, 10 had no evidence of residual tumor in the specimen and, in an additional five patients, only microscopic foci were evident (14).

"Although proximal lesions can be treated surgically, these have primarily been treated using palliative therapy."

Hilgenberg and colleagues reported to the Society of Thoracic Surgeons in 1987 their results with preoperative chemotherapy along with surgical resection and selective postoperative therapy for squamous-cell carcinoma. The patients received preoperative 5-fluorouracil and Cis-platinum along with surgical resection and selective postoperative chemotherapy or radiation therapy. After chemotherapy, 13 of 35 patients had a complete clinical response while seven had a partial response and 15 had no response. Twenty-seven patients underwent surgical resection with one death. Selective postoperative radiotherapy or chemotherapy was administered to 69 per cent. The actuarial survival of all resected patients at 42 months was 54 per cent. Multivariant analysis showed that significant factors associated with three-year survival were: 1) complete clinical response to chemotherapy, 2) absence of wall penetration of specimen, and 3) microscopic or no disease in the specimen (15).

We have begun to administer preoperative and postoperative chemotheraphy to our esophageal patients, and our last patient now is receiving preoperative radiation as well. Although preoperative chemo- and radiation therapy is promising, current therapy is far from satisfactory. Necessary are future studies utilizing randomized trials of currently available agents as well as development of new, more effective chemotherapeutic or immunotherapeutic agents along with radiation for carcinoma of the esophagus.

Palliation of Esophageal Carcinoma

Palliative treatment modalities include radiation therapy or chemotherapy. During radiation therapy, 4000-6000 rads may be administered. Complications include hemorrhage, radiation stricture or tracheo-esophageal fistula. Reported survival for one year is 18 per cent; two years, eight per cent, and five years, six per cent (16). Chemotherapy with single-drug regimens have had minimal tumor response. Response rates of 50 to 80 per cent have been noted with combination regimens including Cis-platinum-Vindesin-Bleomycin, Cis-platinum-Methotrexate-Bleomycin, or Cis-platinum-5FU. Median response with these regimens has been seven to eight months (17).

Endoscopic palliation includes esophageal dilatation, laser photoablative therapy, esophageal prosthesis placement, and BICAP tumor probe. Though surgical gastrostomy or percutaneous endoscopic gastrostomy may be an adjunct in therapy, it is not palliative since the major symptom of most of these patients is dysphagia.

Esophageal Dilation

Palliation dilation can be performed safely in patients with esophageal carcinoma. We dilate patients either with a Gruntzig balloon-type dilator or a guidewire-directed system such as the Eder-Puestow dilator or AMI Savory-type dilators. The mercury-filled, unguided Maloney dilator can also be used; however, in firm or distal lesions it is difficult to introduce

this dilator confidently without the use of fluoroscopy. The perforation rate of esophageal dilation is less than one per cent (18). In some patients the lumen will be maintained less than one week, and in other patients dysphagia will not recur for two- to three-week intervals. If dilation is difficult or early closure of the esophagus occurs following dilation, other therapy such as placement of an endoprosthesis or laser photoablative therapy is considered. In some patients dilation is performed concurrently with radiation therapy.

A recent study has shown that during radiation therapy in 10 patients with malignant stricture, the esophageal lumen could be maintained in eight patients utilizing an average of six dilating sessions (19). Two of the 10 later required stent placement because of either residual tumor or a radiation stricture.

Laser Photoablative Therapy

Utilizing either a Nd:YAG (Neodynium: Yttrium Aluminum Garnet Laser) or Argon Laser, one can perform endoscopic laser photoablative therapy. By application of laser light and energy, malignant tissue is vaporized until the esophageal lumen has been recanalized. One can treat from a proximal location distally over several sessions or dilate and introduce the endoscope distally, treating proximally as one withdraws the endoscope. Though the former treatment is more laborious, requiring in the majority of cases two to three sessions each lasting one to 1.5 hours, a larger lumen is made which may be sustained longer by the patient.

We have now treated 20 patients with esophageal carcinoma using laser photoablative therapy (DS). Three were proximal esophageal lesions, 15 mid-esophageal, and two distal esophageal lesions. Length varied from four cm to 13 cm. After therapy, 18 patients could ingest solids; in one only liquids could be ingested, and in one the procedure was unsuccessful. This patient had a great deal of pain with endoscope introduction and with laser firing, limiting the amount of energy during each session. He exsanguinated during the second week of radiation therapy. This was felt to be secondary to an aorto-enteric fistula which developed following the above treatment. One patient had transient obstruction secondary to edema during radiation therapy which was given following the laser treatment. This patient as well as another patient obstructed after radiation therapy secondary to a radiation stricture. Three patients have had multiple recurrences of dysphagia. After two laser treatments and a third recurrence they have each had esophageal prostheses placed.

Fleischer and Sivak have shown a similar response in 60 patients treated with laser therapy (20). Thirty-five had squamous-cell carcinoma, and 25 adenocarcinoma of the distal esophagus. After treatment some solids could be ingested in 54 of 60 patients. Three of the 60 patients developed a perforation during laser therapy. Two had perforations later during follow-up, and it is unclear whether this was related to the technique or not.

"Either radiation therapy or chemotherapy can be used in conjunction with laser therapy or stent placement, depending on the patient's clinical course."

Esophageal Prosthesis

Insertion of an endoscopic esophageal prosthesis is an alternative mechanism of obtaining and maintaining an esophageal lumen. We have primarily utilized this in patients with early relapse after laser therapy, with extrinsic disease, or with tracheo-esophageal fistulae.

In 1982, Ogilvie et al. reported 121 patients having an esophageal prosthesis inserted under general anesthesia (21). Ninety-six per cent could then consume a soft diet. Thirteen patients expired shortly after introduction of the prosthesis, five secondary to a perforation, two from complications of anesthesia, and the remaining from underlying medical problems. Seven patients later had tube blockage by tumor.

Endoprosthesis has been compared to laser in a nonrandomized fashion by Escourrou et al. (22). One hundred and seventy-three patients were referred for laser photoablative theapy. Of these, 55 had primary treatment with endoprosthesis, 32 due to infiltrative disease, 19 with T-E fistula, and four who refused laser. Of the 118 patients treated with laser therapy, the esophageal lumen could not be reopened in 14 despite multiple subsequent laser sessions. When the lumen was opened it was then maintained by monthly laser photoablative sessions. In the 55 patients with stents, six had eventual failures secondary to tube migration or blockage. Comparative survival between these two techniques was not assessed. Complications with laser included hemorrhage, perforation, pneumothorax and tracheo-esophageal fistula. In the endoprosthesis patients, there was one case of perforation, one of mediastinitis, and four of tube dislocation. Therefore, it appears that laser therapy and endoprosthesis placement have both similar risks and responses to therapy.

BICAP Tumor Probe

A fourth modality is currently available for palliative therapy. This is the BICAP tumor probe. The BICAP tumor probe is inserted into the proximal aspect of the tumor under endoscopic and fluoroscopic guidance, and ablative therapy is then performed using electrocautery over the length of the lesion. Initial results demonstrated excellent palliation; however, delayed bleeding, development of fistulae and proximal stricture formation have occurred (23). Doctor Jensen recently compared the BICAP tumor probe to a low-power Nd:YAG laser used at 50 watts (24). Both techniques resulted in resumption of a soft or solid diet in 86 per cent of patients. The number of treatment sessions between both were identical although the amount of energy delivered and length of time required to use the BICAP probe was much less. The follow-up and survival were identical at 16 weeks. Both required repeat therapy at

six- to 10-week intervals. The BICAP could more easily be applied to proximal lesions, and was found to be safer for circumferential lesions. The YAG laser was more ideally suited for mid-esophageal lesions or lesions which were non-circumferential.

Summary

In summary, patients with esophageal carcinoma should first be staged to determine if they are surgical candidates. Surgery is performed if curative resection is possible and the patient is found to be a suitable surgical candidate. Although proximal lesions can be treated surgically, these have primarily been treated using palliative therapy. If the tumor is unresectable or if there is a relapse after surgery, a palliative dilation is first performed. If dilation does not maintain the lumen for a significant length of time, laser is offered as a primary mode of therapy. If reocclusion occurs early in the patient's course following laser therapy or if it occurs repeatedly after laser, an esophageal endoprosthesis is inserted. An endoprosthesis is also used if a malignant tracheo-esophageal fistula is found. Combined chemotherapy and radiation therapy have been used for surgical candidates. Either radiation therapy or chemotherapy can be used in conjunction with laser therapy or stent placement, depending on the patient's clinical course.

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- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
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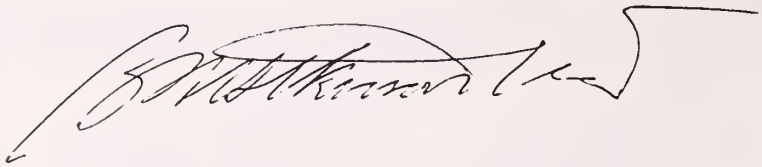

"I have just recently learned of two more pieces of potential legislation, about which I have great concern."

More and More Legislation

In the past I have discussed the importance of our Association's involvement in the legislative process, the need for our members to be active in the lobbying effort, and some of the issues that will be coming up in this legislative session. I have just recently learned of two more pieces of potential legislation, about which I have great concern. One is the "Board of Medicine Rules for Dispensing of Legend Drugs by Physicians and Podiatrists," and the other is Health Department Rule for disposing of infectious waste.

The Board of Medicine was mandated to develop guidelines for the dispensing of legend drugs by the Medical Practice Act of 1980. It has no choice but to proceed in that direction. The proposed draft of those rules, which all WVSMA members should have received by mail in December, was written by a pharmacist-attorney for the Board of Medicine. I find these rules too restrictive and unacceptable in their present form. The rules would restrict access to care for many West Virginia citizens, particularly in the rural areas where many physicians practice several miles from the nearest pharmacy. It will be almost impossible to recruit physicians to these small, isolated, rural towns in some of our larger counties. And, many of those physicians may leave the areas in which they are now practicing. It will be essential to work with the Board of Medicine to produce rules that are acceptable to our members so that they may practice without cumbersome restrictions.

The other piece of proposed legislation (H.R. 3515 U.S. Congress, W. Va. Legislative Rules, Dept. of Health. 64-56) that is of concern is the disposal of what the Environmental Protection Agency (EPA) terms as "infectious waste." This includes waste from hospitals, laboratories, mortuaries, veterinarian offices, dental offices and physicians' offices and other similar institutions.

The EPA has an unusual concern for any waste that contains even the smallest amount of blood, body fluid or animal tissue, even if it is only a cotton ball used to absorb a drop of blood from an injection site. They feel that such a cotton ball or bandage-strip should be placed in a hazard container, labeled and disposed of in a special way by a designated or licensed solid waste disposal company, with a paper trail for tracking all the way from the generator (physician's office) to the incinerator.

The Center for Disease Control (CDC) has stated that waste from physicians' offices is no more hazardous than the waste that is generated in the average household except for the sharp items such as needles and blades; yet, the EPA is pushing for this legislation which carries stiff penalties and liabilities (could be thousands of dollars per day and/or jail sentences) for the generator who does not comply. It has been estimated that the service cost for a single physician office could be several hundred dollars per month. If the Legislature were to do so, this segment of the law could be circumvented by exempting any generator who produces less than 50 pounds of such waste per month.

These are the types of issues that affect our physicians on a day-to-day basis. It is now, more than ever before, important to be a part of, and to work with, organized medicine for the benefit of all of our members. I encourage our members to get involved in the legislative process—stand up, speak out, and be forceful.

—Bill M. Atkinson, M.D.

Spectator Sensitivities

One little-noted resolution endorsed at the AMA Interim Meeting in Dallas was one which encouraged the elimination of boxing as an Olympic sport.

The resolution had no relation to the ill-mannered, ill-tempered reaction of the spectators to a decision unfavorable to one of the Korean crowd's favorites. This was rather an expression of generic revulsion to a spectacle in which young men are trained to stand up and batter one another's brains into a state of malfunction.

The subject of the resolution was one difficult to oppose for a physician. Sure, there are other dangerous sports—football players get mangled every weekend, pitchers throw bean balls daily in the summertime, motorcycles and automobiles crash at race tracks day and night, and even professional wrestlers occasionally injure themselves in an unrehearsed pratfall.

If it were just the potential for injury in boxing being condemned, out of consistency we would be forced to condemn any sport with the potential for producing any injury. No other sports were condemned.

Why boxing? What difference does it make how an athlete or performer gets injured or killed? The results are the same. The costs the same.

The answer seems to be that as spectators we can accept injury, mayhem, even death among our entertainers providing that the misfortune is merely a byproduct of the competition, an accident . . . part of the game. It is the murderous intent to do damage to another human being that offends us.

Civilization does indeed creep forward. And frequently enough it also slides back. We can cheer civilization's advancement and rue its retreat. But we can also rue the interminable wait between Super Bowl Sunday and the first Sunday of football season in September. Let's just not overdo this civilization bit! There are some things worth fighting for.—SDW

Wise Words for Physicians

WVSMA continually urges physicians to get involved in the political process through continued membership in WESPAC, the political action arm of your Association. Your WESPAC contributions enable your PAC to make campaign contributions to those candidates, incumbent or challenger, who are philosophically inclined toward medicine's viewpoint or might be persuaded to vote with medicine's view.

Political contributions are an important expression of your opinion of a given legislator and should be a part of every physician's ongoing activity. But an item from another state's medical journal written by a member of its minority party in its House of Representatives expresses an even more important need, and we quote directly:

> "As nice as a campaign contribution is, physician information and input on the issues is more important. I would like to see physicians all over the state writing their legislators more often and getting together with them. I would especially like to see physicians getting together with those members. . .that haven't been friendly toward issues like malpractice reform or the rate of reimbursement for Medicaid. . ."

The voice of a physician is important and should be heard. Contrary to popular opinion, more of the medical and health issues about which physicians are concerned are non-monetary than monetary. As continuing guardians of the public's health and welfare, physicians need to be heard, and they can speak as agents for the needs of their patients. Whether the issue be seatbelts, drug dispensing, nursing home care, Medicare services, workers' compensation, hearing loss standards, Medicaid reimbursement levels or any other of several issues, physicians need to let their legislators know how they feel.

When's the last time you called or wrote your legislator? Why not schedule a breakfast or luncheon meeting with him/her the next time the legislator is back in the home district? That's what grass roots politics is all about!—MGS

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Lyme Disease Among 1989 Convention Scientific Topics

Norman D. Ferrari III, M.D.

Lyme Disease, the tick-borne illness, will be among scientific presentations for the 1989 Annual Meeting August 16-20 at the Greenbrier in White Sulphur Springs. Other discussion subjects planned to date by the Program Committee include uncompensated care, external influences on the practice of medicine, allergies and environments in buildings, gastritis and peptic ulcer disease, disease prevention, and magnetic resonance imaging (MRI).

"Lyme Disease: The Latest Great Imitator" is the title of the paper to be presented by Norman D. Ferrari III, M.D. during the Friday morning, August 18, scientific session. Doctor Ferrari is Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, West Virginia University Health Sciences Center, Morgantown.

Other WVU Posts

At WVU, Doctor Ferrari also is Director of the West Virginia Children's Diagnostic Center, Coordinator, Medical Student Pediatric Clerkship, Director of the Pediatric Residency Training Program, and physician for the Health Service.

Born in Steubenville, Ohio, he received both his undergraduate degree (chemistry, magna cum laude) and his M. D. Degree (1982) from WVU. He completed residencies in internal medicine-pediatrics and pediatrics at WVU Hospitals, Inc.

Doctor Ferrari, certified in internal medicine and pediatrics, was named Outstanding Pediatric Attending Teacher of the Year at WVU in 1988, Outstanding Intern Teacher in 1982-83, Outstanding Resident Teacher in 1983-86, and received a number of other undergraduate clinical and academic awards. In 1986, he initiated a now annual elective in ambulatory pediatrics for second-semester, first-year WVU medical students.

Doctor Ferrari has lectured on Lyme Disease in Morgantown, Wheeling and Charleston, and is author of the article, "Lyme Disease: A Review," appearing in The Journal in January, 1987 (Page 16). He is Chairman of the WVU Department of Pediatrics Residency Selection Committee, a member of the WVU Faculty Senate and, in 1988, a member of the Committee to Review the Medical College Admissions Test, Association of American Medical Colleges.

Program Format

The 1989 Annual Meeting will follow the usual pattern including the opening session of the WVSMA House of Delegates Wednesday, August 16, a keynote address Thursday morning, scientific sessions Thursday, Friday and Saturday mornings, section and society meetings primarily on Friday, and the second House session Saturday afternoon. A presentation on computer diagnostics is being planned for Friday afternoon. Social and other convention activities will be announced.

Members of the 1989 Annual Meeting Program Committee are Drs. Michael J. Lewis, Morgantown, Chairman; James L. Bryant, Clarksburg; C. Richard Daniel, Beckley; Derrick L. Latos, Wheeling; Michael A. Morehead, Parkersburg; Maurice A. Mufson, Huntington, and Stephen L. Sebert, Lewisburg.

N. H. Dyer Memorial Fund in Mercer

A memorial fund for Newman H. Dyer, M.D., former Director of the West Virginia Department of Health, will be administered by the Mercer County Board of Health, according to the Bluefield Daily Telegraph.

Doctor Dyer, 94, died last October 7 in Princeton, and a memorial fund was established in his honor.

Allen Dyer, M.D., Mercer County Health Director and son of the late state health director, was one of four persons named to a Mercer Board of Health committee to establish guidelines and other procedures for the memorial fund and expenditures.

Checks for the fund can be mailed to the Dr. N.H. Dyer Memorial Fund, c/o the Mercer County Health Department, Rt. 2-Box 382, Bluefield, WV 24701.

Prescribing Course

A course on Rational Prescribing of Controlled Substances will be offered beginning in March, with instructors from the medical and pharmacy school faculty at the West Virginia University Health Sciences Center in Charleston. Further information about the course being formulated may be obtained by calling 347-1260. Registration is limited, but state physicians are encouraged to inquire.

State Family Physicians Plan Scientific Assembly

Gambrell

Selinger

Freithg

Sheehan

Medical subjects ranging from infectious disease to hair growth will be discussed during the two-and-one-half-day CME conference scheduled by state family physicians April 14-16.

The 37th annual scientific assembly of the West Virginia Chapter, American Academy of Family Physicians will be held at the Sheraton Lakeview Resort in Morgantown.

Some 19 physicians and health care personnel from 12 states and the District of Columbia will be on the faculty.

Wilbur Sine, M.D., of Morgantown, is President Elect and Program Chairman.

Speakers and topics will be:

Friday, April 14

"Therapeutic Issues in the Treatment of Lower Respiratory Tract Infections," Thomas Nolen, M.D., Birmingham, Alabama; "Treatment of Otitis Media," Samuel E. McLinn, M.D., Hershey Medical School; "Cost and Safety of Oral Antibiotics," Gary E. Ruoff, M.D., Kalamazoo, Michigan;

"Simplifying the Management of the Insulin-Dependent Diabetic," John Sheehan, M.D., Case Western Reserve; "Update and Treatment of M.I. Patient with Thrombolytic Therapy (TPA)," Harold Selinger, M.D., Charleston Area Medical Center; "New Directions in the Treatment of Congestive Heart Failure," Robert DiBianco, M.D., Georgetown University;

"What's New in Treatment of Low Back Pain," Robert L. Kalb, M.D., Medical College of Ohio at Toledo; and "West Virginia Prescribing Laws and Regulations," Eileen Catterson, M.D., President, West Virginia Board of Medicine.

Saturday

"Effects of Drugs on the Liver," Mack C. Mitchell, Jr., M.D., Johns Hopkins Medical Center; "Pediatric and Adult Incontinence," Rodney A. Appell, M.D., Tulane University; "Pelvic Inflammatory Disease," Guy Benrubi, M.D., University Hospital of Jacksonville;

"Management of Cancer Pain," Carl Strodes, M.D., West Penn Hospital, Pittsburgh; "Diagnosis and Management of Inflammatory Bowel Disease," Alvin Zfass, M.D., Medical College of Virginia; "Calcium Channel Blockers in Prophylaxis and Migraine Headaches," Frederick Freithg, M.D., Diamond Headache Clinic, Chicago;

"The Menopause: Benefits and Risks of Estrogen Progesterone Therapy," R. Don Gambrell, Jr., M.D., Medical College of Georgia; and "Falls and the Elderly," Donna Rane-Szostak, R.N., M.S.N., Loyola University.

Sunday

Psychopharmacology in the Elderly," James Turnbull, M.D., East Tennessee State University; "Consequences of Untreated Anxiety—I.B.S.," Jeffrey C. Hutzler, M.D., Cleveland Clinic Foundation; and "The Bald Truth About Growing and Keeping Hair," James Spindler, M.D., Kalamazoo, Michigan.

A pre-conference seminar on "Practical Applications for Maximum Reimbursement" will be held Thursday, April 13. The seminar, limited to the first 75 registrants, will be presented by Harold Preston, Vice President, Physicians' Practice Management, Charleston.

For additional information, call West Virginia AAFP at 304-776-1178.

Zeb Wright Retires From WVU CME Post

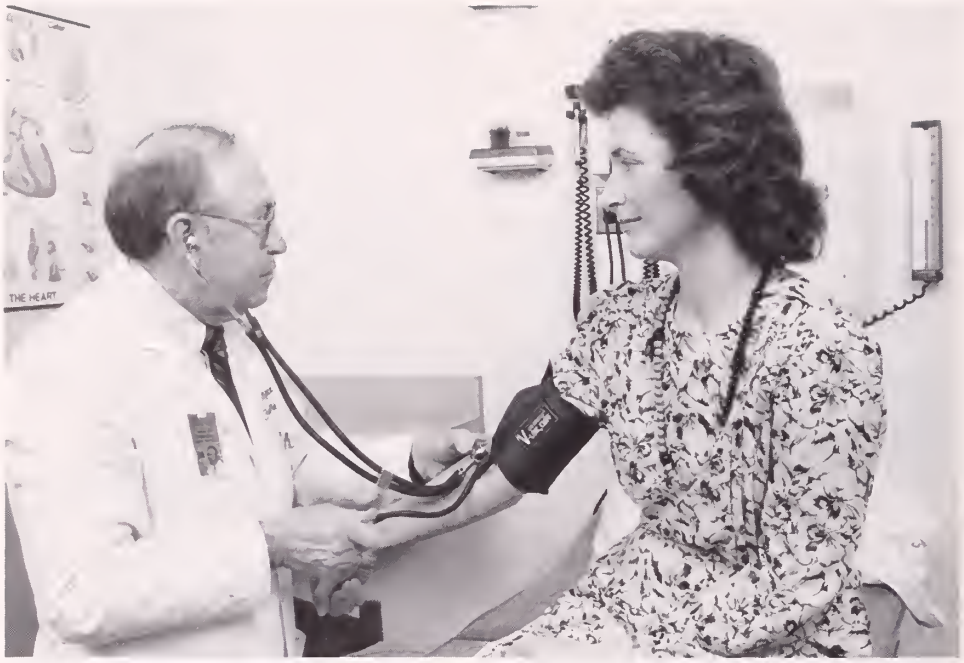
J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs at West Virginia University Health Sciences Center's Charleston Division, retired last December 30.

"My aim when I came 10 years ago was to build a continuing education program easily reached by all physicians and other major health professionals in 30 minutes or less," he said. "Except for a few counties served by other medical schools we've pretty much reached that goal in the southern half of the state."

The North Carolina native came to Charleston in 1966 as an instructional specialist with the West Virginia Department of Education. In 1979 he joined the WVU Medical Center at Charleston as Continuing Education Department/Division Coordinator, building a continuing education outreach program serving over 500 physicians and other health professionals in 27 counties of southern West Virginia.

Becoming Director of Continuing Education Outreach and Community Affairs in 1986, he also was the chief medical newswriter and producer for Charleston Division media releases and special television announcements and programs.

W. O. McMillan, Jr., M.D., Associate Vice President for WVU Health Sciences Center/Charleston Division, expressed his regrets that Wright decided to retire. "Zeb Wright has done an excellent job of developing outreach into southern West Virginia—his expertise will be missed."



Angel Vazquez, M.D., will direct the new Center for Diabetes Care in Morgantown, the state's first such center providing comprehensive diabetes treatment and education.

WVU Diabetes Care Center Established

West Virginia's first comprehensive center for the treatment of diabetes has been established by the West Virginia University Health Sciences Center.

The Center for Diabetes Care will provide patient care services, consultation services for physicians, and an educational program for health professionals and diabetic patients and their families.

As part of the Health Sciences Center, the Center for Diabetes Care can draw on the expertise of specialists including pediatric and adult diabetes specialists (endocrinologists), ophthalmologists, nephrologists, psychiatrists, neurologists, behaviorists, exercise physiologists, nutritionists, pharmacists, and certified diabetes educators (CDE).

Angel Vazquez, M.D., Director of Medical Affairs at the Center, said, "Our primary goal is to improve the quality of life of the individuals with diabetes in West Virginia and the surrounding region. We also hope to reduce the risk of serious diabetic problems by improving metabolic control in individuals with diabetes."

Patients requiring hospitalization will be under the care of endocrinologists from the departments of Internal Medicine or Pediatrics, according to Theodore Kotchen, M.D., Chair of the Department of Internal Medicine and Director of the Inpatients Diabetes Program.

The Center, scheduled to open February 1, will be operated at the University Health Associates Colonial Park physicians' offices in Morgantown. If you would like more information or to make an appointment, contact the Family Medicine Center at 293-5204.

Benefit Weekend

April 14-16 has been set as the dates for this year's Mary Babb Randolph Cancer benefit weekend by the Planning Committee.

The fourth annual event at the Greenbrier will raise money for cancer education programs and research at the Morgantown Center.

Those attending will have an opportunity to meet with the celebrity chefs whose cooking demonstrations will be a main attraction of the gala.

For registration information, contact Mrs. Marshall Miller at (703) 322-4485

Head-Neck Lecture Series, Charleston

Four parts of a five-part* lecture series reviewing clinical, surgical and ancillary aspects of head and neck surgery will be held on the third Tuesdays in February through May in Charleston. Sponsored by the Eye and Ear Clinic of Charleston, Inc., and the Department of Surgery, West Virginia University Health Sciences Center, Charleston Division, the programs are scheduled from 5:30 to 7 P.M. in the WVU Medical Education Building.

The lectures are: February 21, "Carcinoma of the Larynx," Romeo Y. Lim, M.D., and Peter Americo, speech therapist; March 21, "Corneal Transplantation Update," James W. Caudill, M.D.; April 18, "Radiotherapy Imaging Update," Brad Cohen, M.D., and David Sparks, M.D.; and May 16, "Facial Plastic Surgery," Paul Blair, M.D.

The lectures are free of charge and are approved for one hour of Category 1 credit per session. Doctor Lim is the lecture coordinator.

For further information, contact Jane Wiseman at (304) 347-1333.

*Notification was received too late for publication of the first lecture, January 17, "Tracheostomy Update," in the January issue of the *Journal*.

Ophthalmologists Meet April 23-26

The West Virginia Academy of Ophthalmology's 42nd Annual National Spring Meeting will be held April 23-26 at the Greenbrier in White Sulphur Springs.

Featured speakers include Drs. Henry M. Clayman, "Cataract, Implants, and Complications;" Mansour F. Armaly, "Glaucoma;" Frederick H. Davidorf, "Retina and Vitreous;" Richard K. Dortzbach, "Plastic and Reconstructive Surgery;" and William N. Offutt IV, "Legislative and Political Issues."

For further information, contact Ivan R. Schwab, M.D., West Virginia Academy of Ophthalmology, P.O. Box 6302, Health Sciences Center North, Morgantown, WV 26506.

Poetry Corner

Desert Night

A late evening in the stormy
summer of a restless life
as though predestined but with
perfect grace
she appeared with the gentle breeze,
a light shining in the desert sky.

Under a million stars
separated by the cold vastness of
infinity,
with childlike curiosity
we wondered of the solitude of
a man.

For a moment, perhaps eternity,
we saw the light of two shining
as one,
a radiance exceeding far the two
alone,
parted in an instant—the emptiness
of space.

With the struggle of unspeakable
passion,
wrestling through the ages the fate
denied,
momentarily justified in this
dubious existence
only to relearn each carries his
lonely own.

Jeffrey Jackson
Fourth-Year Medical Student
West Virginia University
Morgantown

Love Thou Art

You were beautiful standing there
in the arms of that old tree
I was lucky just being there
Lucky you cared for me.

So long ago it seems to me
I was filled with glee
For in the boughs of that old tree
My love looked down and smiled at
me.

That time has passed there is no
doubt
It really is quite clear
For though I raise my head and
look about
For things that are quite dear

It has all changed the tree is gone
The message that I hear
Is most things die but hear these
words
I'll always love you dear.

J. Paul Aliff, M.D.
Teays (Putnam County)

We request physicians contributions to Poetry Corner: Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston 25364.

Several Dozen Call AIDS Hotline

Several dozen West Virginians have called Charleston's AIDS Hotline during its first three months of operation, most of them seeking information about anonymous testing.

Terrie Lee, Infection Control Coordinator at Charleston Area Medical Center and President of the Charleston AIDS Network, said the telephone Hotline, staffed by volunteers has fielded a variety of inquiries since it began operation October 1.

"Most of the inquiries are about symptoms, transmission and testing," she said.

"Our volunteers are trained to answer these and other questions. Everything is confidential. We also help callers connect with available community resources such as support groups, lawyers to handle legal questions and pastoral counseling where requested," she said.

The Charleston AIDS Network's Hotline is staffed daily between 6 and 8 P.M., but callers may leave messages 24 hours a day on an answering machine.

The Hotine telephone number is 345-4673.

Medical Meetings

February

5—Am. College of Medical Imaging, Los Angeles.
8-9—Fourth Annual Winter Conference, WV ACEP, Ohio ACEP, Canaan Valley.
9-14—Am. Academy of Orthopaedic Surgeons, Las Vegas.
24—Am. Academy of Allergy & Immunology, San Antoino, Tex.

March

1—WVSMA CNA Loss Control Seminar, Second Generation, Charleston.
18—WVSMA CNA Loss Control Seminar, Second Generation, Morgantown.
19-23—Am. College of Cardiology, Anaheim, Calif.
19-24—Am. Society for Clinical Nutrition, New Orleans.
19-24—Am. Assoc. of Immunologists, New Orleans.
19-24—Am. Assoc. of Pathologists, New Orleans.
23-26—Am. Medical Student Association, Las Vegas.
31-April 2—WV Urological Society Spring Seminar, Huntington.

April

2-5—Am. Society of Abdominal Surgeons, Tampa, Fla.
13-16—Am. College of Physicians, San Francisco.
14-16—West Virginia Chapter, Am. Academy of Family Physicians, Morgantown.
22—WVSMA CNA Loss Control Seminar, First Generation, Bluefield
27-29—WV Chapter, Am. College of Surgeons, White Sulphur Springs.
28-30—International College of Surgeons—U.S. Section, San Francisco.

May

7-12—Am. Roentgen Ray Society, New Orleans.
11-14—Am. Geriatrics Society & Am. Federation for Aging Research Annual Meeting (46th), Boston.
14-17—Am. Thoracic Society, Cincinnati.
17-19—Am. Trauma Society, Washington, DC.
21-23—Am. Society of Clinical Oncology, San Francisco.

July

16-22—10th World Medicine Games, Montreal.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Feb. 27-Mar. 1, Rheumatology at Snowshoe (Held at Snowshoe Resort)

Mar. 17-18, Living With Cancer: Oncology Update '89

April 21, Ethical Issues in the Health Care of the Elderly

CAMC/West Virginia University, Charleston Division

Feb. 11-12, Gastroenterology Update, 1989 (co-sponsor, West Virginia Gastrointestinal Society)

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Feb. 23 (program tba)

Brownsville, PA, ★ General Hospital, 11 A.M.—Feb. 3, Adult Reconstructive Surgery: Joint Replacement and Osteotomy Surgery, J. David Blaha, M.D.

Feb. 23, Treatment of Obstructive Sleep Apnea, Stephen Wetmore, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Feb. 9, GI Update, Warren Point, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Feb. 15, Encephalitis, Lenore Breen, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Feb. 7, Lipid Disorders—When Diet Fails, Which Pharmacologic Agent and When?, Irma Ullrich, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Feb. (vacation)

Hurricane, • Putnam General Hospital, 8:30 A.M.—Feb. 16, Update on Substance Abuse, Mark Stephens, M.D.

Logan, • General Hospital, 11:30 A.M.—Feb. 17, Update on Substance Abuse, Mark Stephens, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Feb. 14 (vacation)

Man, • Appalachian Regional Hospital, 7 P.M.—Feb. 21 (program tba)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—Feb. 2, Common Dermatologic Disorders, Rodney F. Kovach, M.D.

Montgomery, • General Hospital, 12 P.M.—Feb. 1, Update on Substance Abuse, Mark Stephens, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Feb. 8, Sports Medicine, David Stoll, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Feb. 9, MRI, David A. Sparks, M.D.

Parkersburg, ★ Camden-Clark Hospital—Feb. 8, Pain Control: Psychosocial Aspects, Richard Gross, Ph.D.

Feb. 22, Alzheimers Disease, Robert Keefover, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Feb. 10 (program tba)

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Feb. 23, Update on Substance Abuse, Mark Stephens, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Feb. 21 (program tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Feb. 7 (vacation)

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Feb. 14, Reflux Management and Upper Urinary Tract Infections, William Tarry, M.D.

Feb. 28, Radiation Oncology, Pushpa Rani Jain, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Feb. 22 (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Feb. 11, Outpatient Management of Tachyarrhythmias, Donald R. Lilly, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Feb. 2 (vacation)

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D. H. Webb, M. D. 525-9355
L. C. Smith, M. D. 522-4422
M. M. Bateman, M. D. 526-0580
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Health Sciences Center News

West Virginia University

New Medical Dean Appointed

Robert M. D'Alessandri, M.D., has been named Dean of the WVU School of Medicine.

Doctor D'Alessandri, Professor of Medicine and Associate Dean for Ambulatory Services at WVU, was selected for the position following an extensive national search.

He succeeds Richard DeVaul, M.D., who left WVU last July to become Associate Provost and Dean of the Texas A&M University School of Medicine.

Doctor James Stevenson has served as Interim Dean, and after a brief transitional period he will return to his position as Medical Director of Chestnut Ridge Hospital and Chair of the Department of Behavioral Medicine and Psychiatry.

Potential Recognized

"We have recognized Bob D'Alessandri's potential since he joined us about 12 years ago," said John E. Jones, M.D., WVU Vice President for Health Sciences.

"We have asked him to take on increasingly challenging administrative tasks, which he has always carried out admirably. Doctor D'Alessandri was strongly supported by the search committee and unanimously viewed as a superior candidate," Doctor Jones said.

"He is perceived as a leader by the faculty and knows their desires and concerns. He therefore takes on the deanship with the support and admiration of both the medical school faculty and the administration."

Doctor D'Alessandri, 43, earned a bachelor's degree from Fordham University in 1967 and was awarded his M.D. degree from New York Medical College in 1971.

He completed an internship at Metropolitan Hospital in New York City in 1972. Following two years of military service, he completed a residency and a fellowship in infectious diseases at the University of Florida.

Robert M. D'Alessandri, M.D.

He joined WVU in 1977 as Instructor and Chief Resident in the Department of Medicine. In 1982, as an Associate Professor, he was chosen both best teacher and best faculty member in the department. He served as Chief of Staff at WVU Hospitals in 1985-86.

In 1987 he was named Associate Dean for Ambulatory services with responsibility for overseeing the planning, financing and construction of the Ambulatory Care Center, which will house the outpatient clinics staffed by the School of Medicine. Scheduled to open in December, 1989, the $25 million center is being financed entirely with funds generated by the clinical activities of School of Medicine's faculty physicians.

A primary care physician, Doctor D'Alessandri is a Diplomate of the American Board of Internal Medicine, and has certification from the Subspecialty Board of Infectious Diseases.

He was principal investigator in a four-year project funded by the Robert Wood Johnson Foundation which helped to expand the resources of WVU's primary care outpatient clinic and contributed to a tripling of patient visits.

Primary Care Interest

Doctor D'Alessandri said his interest in primary care medicine will continue in his new administrative role.

"The WVU School of Medicine has done an excellent job of turning out primary care physicians, a great many of whom are now practicing in West Virginia, and one focus of my efforts will be to continue that emphasis," he said.

Doctor D'Alessandri noted that the School of Medicine is the foundation for the dramatic expansion of the WVU Health Sciences Center in recent years.

"Within the last 15 months Chestnut Ridge Hospital and Ruby Memorial Hospital have opened on the WVU Health Sciences campus. The Mary Babb Randolph Cancer Center and the Ambulatory Care Center are under construction, and a new Rehabilitation Hospital is being planned," Doctor D'Alessandri said.

"These facilities were built at virtually no expense to the state, and they are tremendous resources for West Virginia. . ."

Research Emphasis

Doctor D'Alessandri intends to place increased emphasis on research, developing resources for new projects, rewarding researchers with incentive programs, and opening new areas of communication between clinical departments and basic health sciences departments such as physiology, anatomy, and biochemistry.

In addition to research grants, Doctor D'Alessandri said, the School of Medicine will pursue grants that help the school share its expertise and services with areas throughout the state. He cited the four-year, $1.4 million project supported by the Kellogg Foundation in which the School of Medicine is working to improve the health of low-income women, infants and children in 15 West Virginia counties.

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

WOMEN AND CHILDREN'S HOSPITAL

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77

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CAMC

Women and Children's Hospital

Division of Charleston Area Medical Center

MU School Of Medicine News

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

Pollution Dispute Study Funded

The School of Medicine is beginning a one-year study to ascertain whether people living near industrial plants in the Big Sandy River Valley have more illness than residents of similar-size non-industrial communities.

The study is funded by a $150,000 grant from the Gannett Foundation's Community Priorities Program, according to Dr. Ernest Chick, who will be the project's director. It will be carried out in collaboration with the Cabell County Medical Society.

In announcing the grant, the Gannett Foundation noted that government monitoring stations show that emissions from local oil refining operations rarely exceed federal and state standards.

Strong Odors Reported

"But Ceredo and Kenova residents report frequent strong odors and polluted air that many fear cause illness, including cancer, and death," the foundation said. "This issue is divisive. Many residents want the industries to stop emissions or shut the plants down; many plant workers consider such residents complainers looking to benefit from punitive lawsuits against employers."

Doctor Chick said that because some residents have attributed their health problems to environmental conditions, area physicians have expressed the need for a determination of how valid those attributions might be.

The Marshall researchers will use standard randomization methods to select 200 households for surveying in each of Ceredo, Kenova and three control areas. Members of each household will be interviewed using a questionnaire which incorporates elements of several nationally accepted health surveys as well as questions relating to the occurrence of specific symptoms, diseases or conditions. Interviewers also will request authorization to review participants' medical records.

In addition, randomly selected families will be asked to undergo detailed medical examinations and testing.

"The study will break new ground in environmental medicine and may become an example for other communities to follow as society struggles with its growing dependency on a chemical environment," said Herald-Dispatch Publisher Dan Martin.

Wagner Named To CDC Committee

Gregory Wagner, M.D., of the Department of Family and Community Health has been appointed to the Mine Health Research Advisory Committee of the Centers for Disease Control by Health and Human Services Director Otis Bowen.

The committee was created to advise the HHS Secretary on matters relating to all types of mine health research. It also assesses health research needs and advises on agency program options.

Doctor Wagner, who is Chief of his department's Division of Occupational/Environmental Health, is one of 14 appointed members on the committee. His term runs through 1991.

Doctor Wagner also was an invited participant in the recent U.S.-U.S.S.R. Emerging Leaders Summit in Philadelphia, an event a summit spokesman said drew 180 of the two nations' "top leaders in their fields."

He was a member of the Medicine and Health Care Commission, one of 16 varied commissions which made up the summit.

He and Doctor Risa Lavizzo-Mourey of the University of Pennsylvania will spearhead the efforts of their commission's U.S. contingent to help U.S. and Soviet doctors communicate better with one another through medical journals, a special publication, and other avenues. In the year before the summit resumes in the U.S.S.R., the Soviet contingent will be doing the same.

Doctor Held Honored in Texas

The University of Texas Health Science Center at Houston has created the Berel Held, M.D., Professorship in Obstetrics and Gynecology to honor Held, who now is Chairman of OB/GYN at Marshall.

Doctor Held had spent 16 years in Houston, and was responsible for building the young medical school's Department of Obstetrics and Gynecology there. He was Chairman of that department until it combined with the Department of Reproductive Sciences in 1983, then continued as a full professor.

"Doctor Held was a superlative clinical instructor and developed new methods for teaching medical school students," said Robert K. Creasy, M.D., chairman of Obstetrics, Gynecology and Reproductive Sciences at Houston.

Wedding Receives Foundation Award

Danny Wedding, Ph.D., has received the top professional award of the West Virginia Head Injury Foundation, according to Foundation President Mike Davis.

"Danny has worked very closely with our group on problems associated with head injuries," said Davis. "He's very dedicated. He has done a lot of work for the foundation, and has done a lot of advocacy on behalf of head-injured people. We're proud of his association with our group, and we're delighted to make him the recipient of this award."

Wedding heads up the Division of Medical Psychology, part of the Department of Psychiatry.

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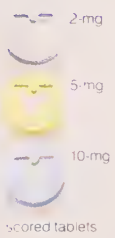

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Obituaries

JOHN R. HATFIELD, SR., M.D.

Dr. John R. Hatfield, Sr., of Princeton was dead on arrival December 9, 1988, at a Princeton hospital after a short llness. He was 60.

Doctor Hatfield was retired and an Army veteran of the Korean War.

A graduate of the Medical College of Virginia, he practiced at hospitals in Holden, Gilbert, Welch and Charleston. He was associated with the Mercer County Health Center for 10 years.

Survivors include the wife, Loretta Suarez Hatfield; two sons, John R. Hatfield, Jr., of Charleston and Timothy Hatfield of Oceana; and a sister, Mildred White of Gilbert.

GROVER C. HEDRICK, JR., M.D.

Dr. Grover C. Hedrick, Jr., retired Beckley pediatrician, died January 4 in a Beckley hospital. He was 76.

Doctor Hedrick was Chief of Pediatrics at Raleigh General Hospital from 1946 to 1983, and was Associate Pediatrics Chief at Beckley Appalachian Regional Hospital in 1955.

He was a former physician for Leconey Smokeless Coal Company, Besoco, and a former plant physician for Union Carbide at Alloy.

He attended the former New River State College at Montgomery, and received his M.D. degree in 1937 from the University of Maryland. He interned at St. Agnes Hospital in Baltimore and New York Post Graduate School of Medicine.

A World War II Army veteran, he was a former President of the West Virginia Pediatric Society and Raleigh County Medical Society.

He was a member of the New York Academy of Medical Science and was a Director of Beckley Appalachian Regional Hospital and Raleigh General Hospital.

He also was a member of the West Virginia Chapter, American Academy of Pediatrics, and Aerospace Medical Society, and was an honorary member of the Raleigh County Medical Society, West Virginia State Medical Association and American Medical Association.

Doctor Hedrick was awarded a pin and recognition for 50 years of medical practice from the West Virginia State Medical Association in 1987. He retired in 1987.

Survivors include the wife, Mary (Betty) E. Hedrick; a brother, Dr. Thomas A. Hedrick of Johnstown, Pennsylvania, and two sisters, Macie Shank, Huntington, and Ruth Tulley, Beckley.

VICTOR S. SKAFF, SR., M.D.

Dr. Victor S. Skaff, Sr., formerly of Charleston, died January 3 at the home of a daughter, Mrs. Betty Ann Kidd of Elkins. He was 75.

Doctor Skaff was a former Chief of Staff and Chief of Surgery at Charleston General Hospital and Thomas Memorial Hospital in South Charleston. He had most recently served as Medical Director for Blue Cross/Blue Shield of West Virginia.

He was graduated from West Virginia University, and received his M.D. degree from Washington University Medical School in St. Louis, Missouri.

Doctor Skaff was an honorary member of Kanawha Medical Society and a former member of the West Virginia State Medical Association.

He was a Fellow of the American College of Surgeons and a Diplomate of the American Board of Surgery. Also surviving are a son, Dr. Victor S. Skaff, Jr., Roanoke, Virginia; two daughters, Mrs. Phoebe Allison, Gainesville, Florida, and Mrs. Karen Hickok, Los Angeles; two brothers, Mitchell Skaff, South Charleston, and Philip Skaff, Huntsville, Texas, and three sisters, Edna Crusan, Los Angeles; Nellie Skaff and Charlotte E. Skaff, both of Charleston.

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County Societies

MONONGALIA

The Monongalia County Medical Society met December 6 in Morgantown.

A proposed constitution and bylaws amendment increasing the quorum for meetings was announced, and will be voted upon later.

New officers for 1989 were elected.—Robert L. Murphy, Executive Secretary.

PARKERSBURG ACADEMY

Stephen Grubb, M.D., Charleston, was the guest speaker for the meeting of the Academy of Medicine of Parkersburg December 14. His subject was "Evolution in the Management of Hypertension."

The Academy approved the recommendations of the Ad Hoc Committee appointed to look into the issue of outside labs coming into the area and performing blood tests, heard reports concerning the recent AMA Interim Meeting and the Relative Value Scale which was accepted, in principle, by AMA; the WVSMA Personal Care Program in which individual physicians will be able to give their patients a card indicating that when they are below the poverty level the physician will give them some kind of an assignment; and the need for physicians being involved in community service.

The Academy also elected new officers for 1989, and approved contributions to sponsor two students to perform at the Christmas Pageant of Peace in Washington, D.C., and for one-hour sponsorship of the Easter Seals Telethon, March 4-5.--Adam Toppercer, M.D., President.

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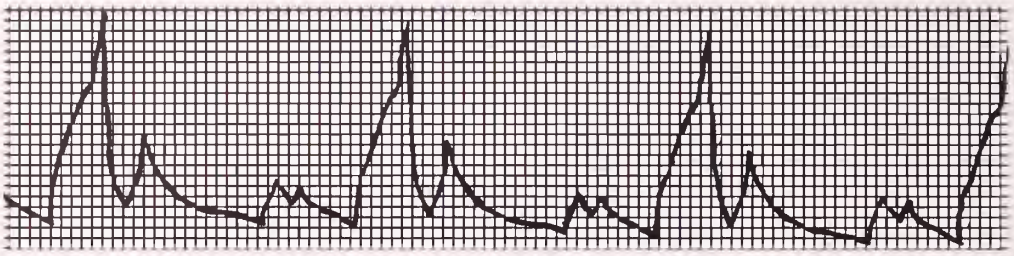

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Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

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Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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1. Ann Intern Med 1982;96:766-71.

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Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function:* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

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Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSO) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

Hypertension. The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category.

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest; pulmonary embolism and infarction; rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin. Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other. Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests. Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment. The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure,* WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA
PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

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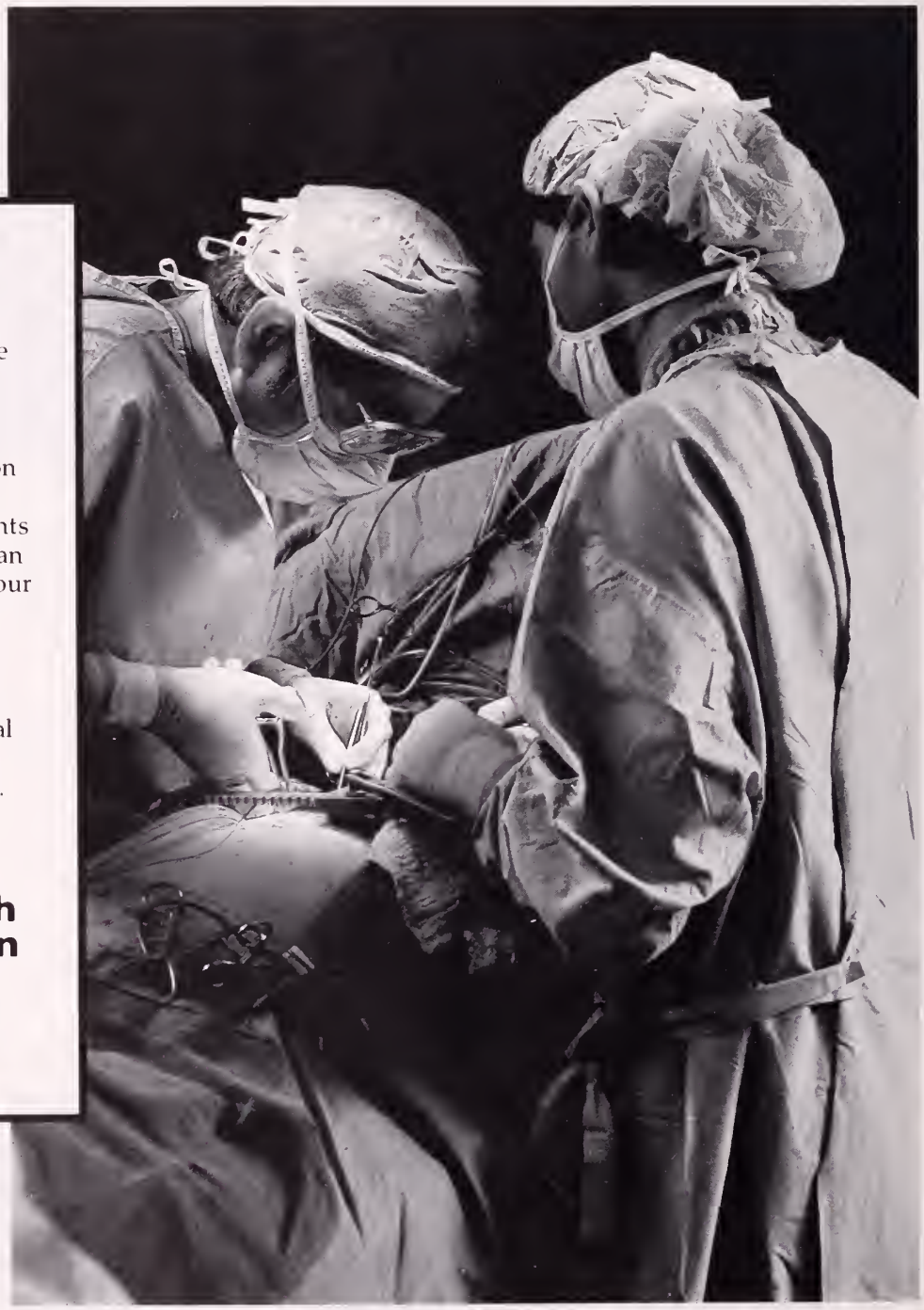
Sometimes Being Sure Of Yourself Just Isn't Enough.



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Sudden Cardiac Death

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This article reviews the epidemiology of sudden cardiac death, and outlines suggested management of patients who are successfully resuscitated from cardiac arrest. Emphasis is placed on the favorable impact of newer means of therapy on the very high recurrence rate using empiric antiarrhythmic treatment.

Uuntil recent years, cardiac arrest was almost uniformly fatal. With prompt resuscitation, many patients now survive to hospital discharge, but they face a one-in-four yearly mortality rate if treated in a conventional fashion with empiric use of antiarrhythmic drugs. Antiarrhythmic drugs selected on the basis of electrophysiologic testing, and nonpharmacologic treatment with the recently approved automatic implantable cardioverter defibrillator (AICD) have dramatically improved the survival of these patients. The growing availability of these newer modalities, including present availability at several centers within our own state, strengthens the need for an active and positive attitude toward the management of these challenging patients.

The purpose of this article is to review the role of these newer approaches to the prevention of sudden cardiac death.

Epidemiology

Each year 600,000 people die from heart disease in the United States. Approximately half of these deaths are the result of out-of-hospital cardiac arrest. For West Virginia, this translates into approximately 2,500 cases of out-of-hospital cardiac arrest per year. A major determinant of survival following cardiac arrest is the promptness with which cardiopulmonary resuscitation (CPR) is initiated. In data reported from Seattle, the chance of survival to hospital discharge doubled to 43 per cent when CPR was initiated by bystanders, compared with CPR initiated only after arrival of a rescue squad (1). The growing numbers of people trained in CPR mean that each year more victims of cardiac arrest are likely to survive to be discharged from the hospital. Unfortunately, several studies indicate that they face a 25-per cent yearly risk of recurrent sudden death without effective treatment (2,3).

"The growing availability of these newer modalities . . . strengthens the need for an active and positive attitude toward the management of these challenging patients."

Clinical Characteristics

The median age at cardiac arrest is about 65 years, and the median for men (age 59) is 20 years younger than for women. The incidence in men is three times that in women. Half of all victims have a preceding history of overt coronary disease (4). Among successfully resuscitated survivors, 80 per cent have significant angiographic coronary disease; most of the remainder have dilated cardiomyopathy or valvular disease. The extent of coronary disease is similar to that for the entire population of patients with ischemic heart disease. Global or regional abnormalities of ventricular function are common, but about one third of survivors have normal or nearly normal ejection fractions (5).

Enzymatic evidence of myocardial infarction is seen in about 30 per cent of those who are resuscitated, and about 20 per cent of the total develop new Q waves indicative of "transmural" infarction. At the time of resuscitation, 90 per cent of victims are found to be in ventricular fibrillation, the highest prevalence being found in those resuscitated within four minutes of collapse (6). Data from series of patients who suffered arrest wearing Holter monitors confirm that arrests infrequently are initiated by bradyarrhythmias (7). When present, however, these have an extremely unfavorable prognosis (5).

Initial Management

Prompt administration of CPR is obviously the mainstay of initial treatment for cardiac arrest. The cardiac rhythm should be determined as quickly as possible, and electroversion should be performed without delay. Details of the revised guidelines for Basic and Advanced Cardiac Life Support have been published elsewhere (8,9).

Following hospitalization, a search for possible precipitating factors is begun while the patient is being medically stabilized. Evidence for myocardial infarction is sought through history and serial electrocardiograms and cardiac enzyme determinations. When there is evidence for acute myocardial infarction, especially non-Q wave infarction, it may be difficult or impossible to determine if the arrhythmia was a primary or a secondary event. The distinction is an important one, because the prognosis with a secondary arrhythmia

appears to be much better than if the arrhythmia is the primary event (10). In practice, we tend to consider small elevations of cardiac enzymes (1.5-2.0 times the upper normal range) to be secondary to hypotension and trauma associated with CPR, while Q wave infarctions are generally considered primary precipitating events.

In reported series, the hospital mortality for patients who survive to admission is approximately 40 per cent (5). Anoxic encephalopathy, cardiogenic shock, and infectious complications of prolonged mechanical ventilation are the major causes of in-hospital death. Recurrent arrest is infrequent but carries a high mortality.

Patients with adequate cardiorespiratory and neurologic recovery should have a thorough evaluation for underlying structural heart disease. In most cases this should include coronary angiography and assessment of ventricular and valvular function. Occasionally, no obvious structural abnormalities are found, and in this setting consideration should be given to performing endomyocardial biopsy in an effort to detect otherwise occult myocarditis or other potentially treatable forms of cardiomyopathy (11).

Secondary Prevention

As indicated, there is a high recurrence rate in patients successfully resuscitated from cardiac arrest other than that complicating the early hours of acute myocardial infarction. Those who are untreated, or who, as often happens, are simply placed on empiric antiarrhythmic therapy, face a 25-per cent-per-year mortality rate for at least the first two years after their event. Has the availability of amiodarone, widely regarded as the most efficacious drug for suppressing ventricular arrhythmias, altered this dismal prognosis? Studies in patients with sustained ventricular tachycardia or ventricular fibrillation indicate that there is still about a 20-per cent-per-year arrhythmia recurrence rate in those who receive empiric treatment with amiodarone. In the study of Lavery et al. (12), over 40 per cent of recurrent, life-threatening arrhythmias occurred in the 75 per cent of patients who appeared to have a satisfactory initial response by Holter monitor criteria. When one also considers the potential for multiple serious, long-term side effects (13), these figures indicate that amiodarone is not a pharmacologic panacea for preventing malignant ventricular arrhythmias.

A variety of nonpharmacologic approaches including coronary bypass grafting and nonguided ventricular aneurysmectomy also have been tried, and also have had disappointing results in preventing eventual sudden death (14,15).

"The two most promising approaches are the use of drugs selected through electrophysiologic testing, and the use of the automatic implantable cardioverter defibrillator (AICD)."

At present, four modes of treatment have been shown to reduce substantially the mortality in groups of patients successfully resuscitated from near sudden death. The two most promising approaches are the use of drugs selected through electrophysiologic testing, and the use of the automatic implantable cardioverter defibrillator (AICD).

Elecrophysiologic Testing

The subject of electrophysiologic testing was reviewed in a recent issue of the *Journal* (16). For the evaluation of patients resuscitated from cardiac arrest, the usual protocol involves electrical stimulation of the heart using a set of transvenous electrode catheters connected to a special pacing device in an effort to induce a sustained ventricular arrhythmia. This is first performed after withdrawing antiarrhythmic drugs in order to establish a baseline to permit subsequent assessment of the efficacy of various drugs. When a sustained arrhythmia is induced it is recorded and terminated, usually by overdrive pacing. If this is not successful, transthoracic cardioversion is performed. The reported complication rate for the procedure is very low (17), and our own experience confirms this.

With these techniques, 50 per cent of survivors are inducible into sustained ventricular tachycardia, and 30 per cent are inducible into nonsustained ventricular tachycardia (18). Inducibility is greater in those who present with sustained ventricular tachycardia than in those who present with ventricular fibrillation. Those who are inducible are then given a drug, and testing is repeated. If a drug is found that prevents reinduction of the arrhythmia, the odds are very high that it will be clinically successful in preventing recurrent cardiac arrest.

Data from several studies indicate that the yearly rate of sudden death in patients receiving drugs found to be effective through electrophysiologic testing is approximately 10 per cent (18). Such drugs can be found for about 60 per cent of these patients. If no drug can be found that prevents reinduction of the arrhythmia, the annual mortality rate is about 30 per cent (18).

There are conflicting data regarding the prognosis of survivors who are not inducible into a sustained arrhythmia at their initial baseline test. Early studies indicated a favorable prognosis, but a larger and more recent study points to a 20-per cent yearly mortality rate in this group, a rate which was not improved with empiric antiarrhythmic treatment (19). We believe that these individuals are at a high risk for recurrence, and deserve "aggressive" treatment.

Implantable Defibrillator

A second treatment of established efficacy in preventing sudden death is the AICD. Pioneered in the 1960s by Mirowski and colleagues, a refined version of this device was approved by the F.D.A. in 1985. Its components include a generator which contains sensing circuitry, batteries, and a capacitor, sealed within a metal container. The device is implanted in an abdominal wall pocket and is connected to the heart through several electrodes. During normal rhythm it remains in a standby mode. If the patient develops ventricular tachycardia or

ventricular fibrillation, the device charges the capacitors and delivers a 25-30 joule shock through the electrodes to restore normal rhythm. Ten to 20 seconds are usually required to recognize an arrhythmia and provide a shock, by which time the patient has usually lost consciousness. If the initial shock is unsuccessful, subsequent shocks can be given at a higher energy output.

Over 4,000 devices have been implanted, and they have dramatically lowered the risk of sudden death to approximately two per cent per year. Patients who have been resuscitated from cardiac arrest not caused by an acute myocardial infarction and who have no inducible arrhythmia during electrophysiologic testing, or for whom no effective drug can be identified through serial electrophysiologic testing, should be considered strongly for this device. It has proved remarkably safe and effective, and represents a major advance in managing survivors of near sudden death. Further details about the AICD including some potential pitfalls and complications can be found in several recent articles (20,21).

Surgical Ablation

Selected patients with inducible malignant arrhythmias also may be considered for a third type of treatment, which involves surgical ablation of the arrhythmic focus, guided by intraoperative electrophysiologic techniques (22). This approach has the advantage of being potentially curative, and in published series has a high success rate. Late malignant arrhythmias are found to occur in approximately five per cent of patients per year treated with these procedures (22). The major disadvantage is an operative mortality which has approached 10 per cent with certain ablative methods, considerably higher than that for implantation of the AICD. The best candidates for guided ablation are patients with refractory sustained monomorphic ventricular tachycardia and relatively well preserved left ventricular function who are undergoing cardiac surgery for associated indications such as coronary artery bypass grafting.

Noninvasive Testing

Finally, the Lown group in Boston has shown that a rigorous protocol of serial noninvasive testing with multiple quantitative Holter monitors, repeated exercise tests, and trials of multiple antiarrhythmic drugs can be used to select an effective combination of antiarrhythmic drugs in about three quarters of patients with malignant ventricular arrhythmias including survivors of near sudden death (23). The costs of this prolonged, arduous approach are greater than with therapy guided by electrophysiologic testing, and the efficacy for prevention of sudden death appears to be lower than with the AICD (24). In addition, for 20 per cent of survivors of near sudden death there are insufficient baseline arrhythmia data to serve as a pretreatment control. For these reasons, this serial noninvasive method plays a secondary role at most centers in managing those at great risk of cardiac arrest.

It is hoped that this overview of recent advances in therapy for survivors of near sudden death will stimulate a more positive approach to prevention of recurrent cardiac arrest. The methods outlined in this article have had a very favorable impact on patient survival, and should be made available to all who are fortunate enough to have been successfully resuscitated from a primary episode of cardiac arrest.

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Unusual Site for an Unusual Disease

Malacoplakia of the Prostate

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Malacoplakia is an unusual granulomatous disease that most frequently affects the urinary tract, but also may affect other organ systems. Only about 200 cases have been reported in the literature (11), and only 11 have involved the prostate (1-10). We report the twelfth case of malacoplakia of the prostate.

Case Report

M.E. is a 38-year-old white male presenting to his local hospital with the complaint of left flank pain and history of recurrent urinary tract infections with Escherichia coli. The remainder of his medical history was insignificant. The patient denied hematuria, pneumaturia or difficulty voiding. He underwent an evaluation which consisted of CT scan of abdomen and pelvis, ultrasound of the kidneys, renal scan, IVP, cystoscopy with retrograde pyelogram, renal arteriography, barium enema, sigmoidoscopy and rectal examination of the prostate. All of these studies were normal.

The patient was treated with an aminoglyocoside and a cephalosporin, to both of which the Escherichia coli was sensitive. His symptoms resolved. He was discharged and within one month presented to our clinic with the same complaint. Physical examination revealed a cachectic white male with mild left flank tenderness and a "rock hard" prostate. His urine culture revealed Escherichia coli sensitive to aminoglycosides and Furadantin. We repeated his IVP and performed a cystoscopy, which were normal. We biopsied his prostate, and the pathology report was "granulomatous prostatitis, probable malacoplakia." Anergy tests were subsequently non-reactive. An evaluation for the anergy and cachexia was nondiagnostic. He had no risk factors for AIDS. The specimen was sent to AFIP for review, and the diagnosis was "malacoplakia of the prostate." They could not demonstrate Michaelis Gutmann bodies.

The high-power and low-power micrographs are shown in Figure 1 and Figure 2. The dense aggregates of large numbers of macrophages in a scanty connective tissue stroma (arrows) are known as van Hansemann Cells. Many lymphocytes and plasma cells are also present. There were no Michaelis Gutmann bodies present, but this is probably early malacoplakia, and these are not necessary for diagnosis (12).

Discussion

Malacoplakia of the urinary tract is a chronic granulomatous disease which affects females four times more than males (12). It has been associated with chronic coliform infection (1-13), and its association with immunosuppression is well documented. The defect seems logically to be at the level of phagocytosis and intracellular digestion (9, 13). Many have been led to speculate that xanthogranulomatous pyelonephritis, granulomatous prostatitis/orchitis and malaoplakia are all different degrees of the same process.

Determining treatment for malacoplakia is difficult. Regimens are many with only anecdotal results. One would suspect that antibiotics that would enter the macrophage and kill the intracellular bacteria would prove more efficacious. Rifampin and Trimethoprim would seem to fit the role. Bethanechol and vitamin C have been postulated to have a beneficial effect. Treatment for renal involvement usually seems to lead to nephrectomy (15,16). Some advocate nephrectomy as the initial treatment of choice (16).

Our patient illustrates the common aspects of malacoplakia, and adds support for the previously described risk factors. He had recurrent urinary tract infections with Escherichia coli, and has some idiopathic defect to his immune system. The medical specialist could not provide an etiology for his cachexia or anergy. The pathologist

Figure 1. Low-power micrograph of malacoplakia of the prostate (arrows depict sheets of Hansemann Cells)

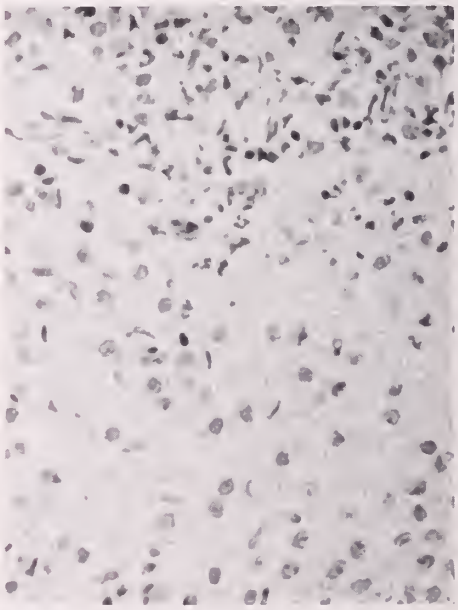

Figure 2. High-power micrograph of Hansemann Cells (Macrophages)

originally confused granulomatous prostatitis with malacoplakia. The prostate was hard and enlarged, and has been confused by others for carcinoma of the prostate (7).

We began treating our patient with a one-week course of gentamicin, and followed with prophylactic doses of macrodantin and Vitamin C. His flank pain and recurrent urinary tract infections have resolved. He continues without voiding difficulty, but his prostate examination is unchanged. He will probably need surgical intervention if the disease progresses despite sterile urine.

This paper adds to the current fund of knowledge for this rare disease, and supports the previous hypotheses for its development and treatment.

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The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

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Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

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Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

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The Virus in Our Midst

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One institution's collective experience with the HIV-infected (1985-1987)

AIDS and HIV-seropositivity have shown increasing prevalence in the Mountain State. Charleston Area Medical Center (CAMC), being the state's largest tertiary health center, has attracted a number of seropositive patients. This sample, though small by comparison to the experience of other tertiary centers, constitutes the largest single cluster of patients so studied in a single West Virginia hospital to date.

This study documents both sociological and economic issues associated with the AIDS population. A clear profile of the typical AIDS patient in West Virginia emerges: 1) gay male; 2) native son; 3) unemployed; 4) Medicaid-dependent; 5) clinically well advanced; 6) infected out of state; 7) under age 30; 8) tertiary care dependent; and 9) homeless.

The paper closes with a discussion of the possible growth of the AIDS population in West Virginia in the years ahead. Strategies are set forth to serve as guidelines for managing effectively the AIDS population's needs in both the clinical settings and in society at large.

With each passing day, the magnitude of the AIDS epidemic assumes greater proportions. What began seven years ago as a scientific curiosity affecting only a handful of gay men has now mushroomed into a worldwide epidemic. The number of newly diagnosed cases of AIDS in the United States is increasing by 70 per day. The cumulative number of AIDS cases since January, 1981, has reached 77,994 as of November 7, 1988 (1). As the diagnostic rate accelerates, the next numerical milestone—100,000 cumulative cases—will be reached in the late summer of 1989.

West Virginia, for its part, is ranked 45th among all states, with a total of 57 AIDS cases (2). Due largely to both social and demographic factors, our "AIDS epidemic" has been defined on far less critical terms when compared with the experience of other states. This is not to suggest that AIDS issues should be taken lightly in West Virginia. It does suggest, however, that set against other chronic illnesses already prevalent in the state (heart disease, cancer, stroke, etc.), AIDS and related diseases have not established themselves as a top health priority in West Virginia. . .yet.

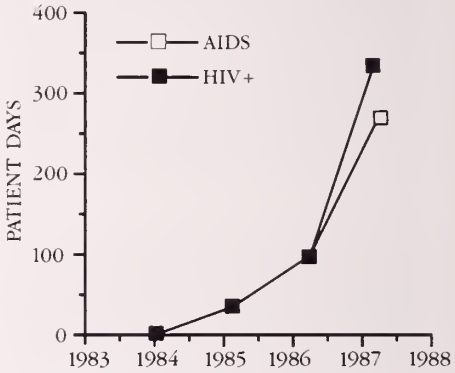

Figure 1. CAMC patient days.

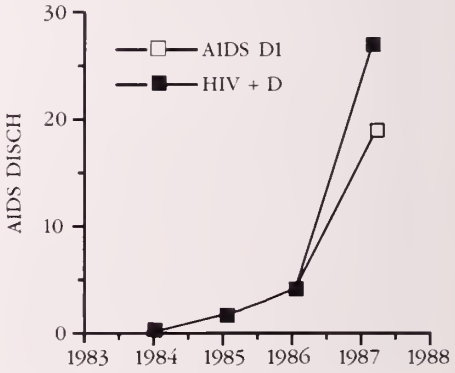

Figure 2. HIV seropositive discharge (1983-1987).

In an effort to gauge the effect of HIV infections upon the state's largest tertiary health care system, a retrospective review of cases seen at Charleston Area Medical Center (CAMC) between 1985 and 1987 was undertaken. This paper is a discussion of that review.

First AIDS Patient

CAMC's first AIDS patient arrived at the Memorial Division in early 1985. Prior to this young man's appearance, the AIDS epidemic seemed far away. With the presentation of this first case, the hopes of many West Virginians. . .that the Appalachian hills would indefinitely protect them from the epidemic. . . were dealt a striking blow. The distant epidemic now had a human face; a young native son was dying of AIDS. As 1985 came to a close, with the CDC monitoring a national caseload of 17,000 AIDS patients, CAMC had cared for only two people with AIDS (PWAs), both gay men, accumulating a total of 25 patient days (3).

As 1986 unfolded, professional publications began to document that AIDS and other AIDS-related infections were more than just "a gay, white man's disease." Indeed, our experience reflected this as, along with more gay men, CAMC also cared for its first child, woman, and intravenous drug user with AIDS. While patient days related to AIDS tripled, the total still represented only 0.04 per cent of all patient days for CAMC in 1986.

By 1987, the AIDS epidemic had clearly moved beyond its metropolitan base, extending throughout much of rural America. CAMC's experience reflected this transition as the caseload tripled, patient days tripled, and hospital admissions for AIDS increased by 360 per cent over the previous year. Remarkably, the asymptomatic, HIV-seropositive patients (all hemophiliacs) made their clinical presence known, constituting 27 per cent of the HIV-infected patient days for 1987 (Figures 1, 2).

From all indications, CAMC has managed approximately 20-30 per cent of West Virginia's recorded AIDS cases. None of the reported patients seen at CAMC appears to have acquired HIV infection while residing in the state. In fact, all 14 patients evidenced high-risk exposure while living in major metropolitan United States cities where the virus is known to be highly prevalent.

As evidenced by this population, PWAs came to West Virginia with very advanced symptoms of HIV-induced immune suppression, having exhausted all economic resources in their previous residences. On a national scale, this consistently has been the picture typifying the ruralization of the epidemic. Consequently, due to this tendency for PWAs to return to the Mountain State toward the end of their lives, the economic impact of AIDS upon the health care system here has been blunted. To illustrate, 77 per cent of persons in this study population died within the same year they were first seen at CAMC. In a resource utilization sense, this finding suggests that AIDS-related hospital days and clinic visits will be fewer for West Virginia hospitals and clinics. However, it also suggests that these patient visits will be characterized by higher acuity and cost providing that said hospitals continue their present over-reliance upon the classical acute care system as the primary mode of health care delivery.

TABLE 2

Demographics

N = 14 [12 Male, 2 Female; 11 Gay, 2 IVDU, 1 In Utero]

Mean Age = 29.2

Average Length Of Stay = 13.15 Days

Charges Per Discharge = $7,850

Total Hospital Days Per Patient (lifetime) = 24.98 Days

Discharges Per Patient (lifetime) = 1.9

TABLE 1

Patient	*Discharges*	*Days*	*Charges*	*Cha/Day*	*Payor*	*Year*
A	1	5	3,220	644	BC	1985
B	1	20	15,330	766	BC	1985
C	4	67	33,200	496	MC	1986
D1	1	12	3,240	270	MC	1986
D2	4	64	34,250	535	MC	1987
E1	1	14	6,740	481	PE	1987
F	1	17	5,630	331	SELF	1987
G	1	6	2,600	433	BC	1987
H	1	5	4,270	854	SELF	1987
I	1	63	51,500	817	MC	1987
J	3	15	8,000	533	MC	1987
K	3	40	20,700	518	MC	1987
L	2	9	6,500	722	MC	1987
M	1	3	6,000	2,000	MC	1987
N	1	2	2,870	1,435	MC	1987
TOTALS	26	342	204,050	(597)		

Key BC = Blue Cross MC = Medicaid PE = Public Employee SELF = No Insurance

It can also be expected that, due to the sophisticated care needs of PWAs, they will seek out select hospitals and medical centers where their clinical and social needs can best be met through contact with specialized care-givers, technologies, therapies, and effective community liaisons.

Costs

In order to better appreciate the nature of some of the economic issues presenting in this population, an illustration of both the inpatient and outpatient charges accumulated by these patients during the study period can be seen in Table 1. As can be seen from this data, the total costs encountered by CAMC in managing these patient has been relatively small when compared with those seen in the management of other chronically-ill persons. However, from the beginning of our experience with PWAs, most patients were indigent, thereby reflecting a strong Medicaid and private pay influence (Table 2, Figures 3, 4). This trend became especially manifest in 1987, a year in which we saw 19 of the 26 cumulative discharges, 69 per cent of all cumulative AIDS patient days, 90 per cent of all AIDS charges funded by Medicaid, and a rising daily charge for AIDS patient care (Figures 5, 6).

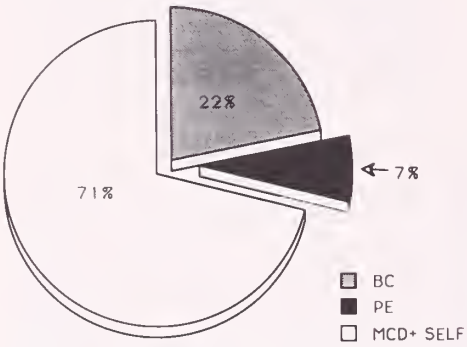

Figure 3. PWAs by payor, N=14 (1985-1987).

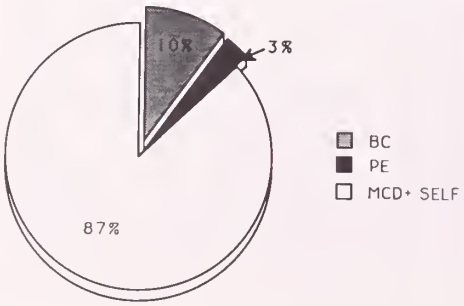

Figure 4. Charges by payor. Total = $204,050 (1985-1987).

Although much of this data appears dismal from a financial point of view, when compared with the AIDS experience of other metropolitan hospitals, CAMC's history to date has been rather mild. After evaluating these 14 patients' charges, an average lifetime expense was only $14,575 (inpatient and outpatient charges only). The range of these charges varied from $2,600 to $51,500. The Blue Cross patients averaged only one hospitalization, whereas the more indigent population averaged 2.2 hospitalizations. The Blue Cross/PE population averaged 10.1 hospital days per admission, whereas the indigent AIDS population hospital length of stay was 33 per cent higher at 13.5 days. This accounts for the higher total charges seen in caring for the indigent PWAs as seen in Table 3.

Again, this discrepancy is related to the tendency for indigent PWAs to have greater difficulty in accessing health care. When they finally do access it, their acuity has consistently required more costly health care resources to return them to a state of relative health. The other factor consistently driving up their costs of care is the dearth of housing and non-institutional health care systems available to PWAs. On frequent occasions with these 14 patients, this institution was forced to maintain the patient in the acute care setting because there was simply no where else to go.

TABLE 3

	Length of stay	*Charge per admission*
Medicaid/Private Pay	13.5	$8,400
Blue Cross/PE	10.1	$6,990

When comparing our finance data with the experiences of other institutions of comparable size, several interesting disparities are manifest (Table 4). To explain part of the cost discrepancy seen above, it should be noted that charges incurred in the larger hospitals in the years 1981 through 1985 were driven up in part because of the tendency within these hospitals to rely heavily upon intensive care to support these patients. In contrast, of the 26 hospitalizations in the CAMC data, only two (eight per cent) involved intensive care unit stays. It appears that although "sick" PWAs came to CAMC for care, rarely did they present with a cluster of symptoms which required intensive care. Many were too debilitated to experience any therapeutic benefit from this level of support coming so late in their lives (Figure 7).

Cost Projection

In summary, having addressed institutional, state, and national experience with the epidemic, it would now be appropriate to project forward a few years to suggest how the AIDS epidemic might manifest itself.

On a national scale, between 1986 and 1991, the country will spend some $3.4 trillion on health care. Additionally, both the state and federal governments will expend approximately $361 billion for Medicaid alone. In the midst of this, AIDS costs will be expected to account for between 0.5 per cent and 3.3 per cent of all national health care spending during this time while claiming between 0.6

TABLE 4

Hospital	Length of Stay	Av. Charge/Day	Av. # Disch's/Pt.
L.A. County	17.9	$1,038	5.6
S.F. General	12.3	918	1.7
New York City	18.2	597	—
Univ. of Miami	21.0	858	3.2
Univ. of Minnesota	12.3	917	3.4
New England Deaconess	21.3	808	3.3
CAMC	13.2	597	1.9

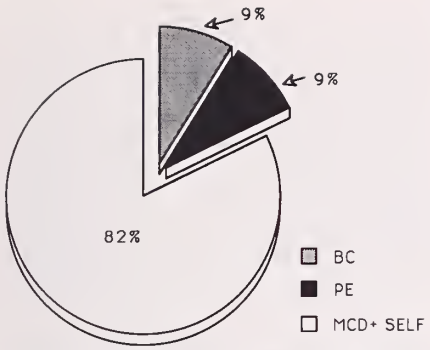

Figure 5. PWAs by payor, N=11 (1987 ONLY).

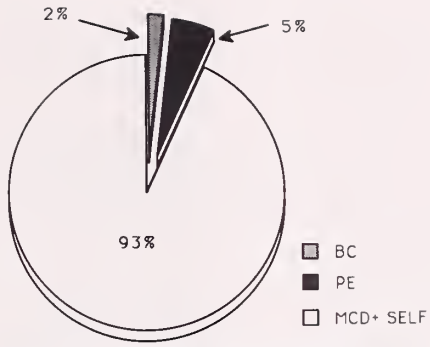

Figure 6. Charges by payor-AIDS only. TOTAL = $149,060 (1987 ONLY).

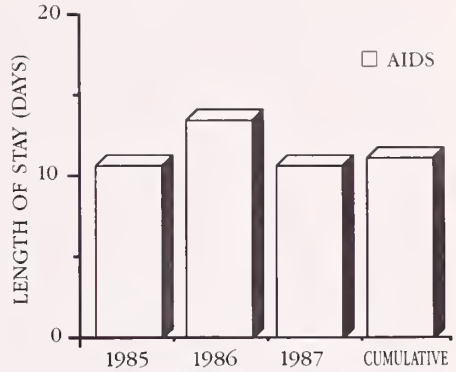

Figure 7. Inpatient length of stay (Hospitalization), AIDS only (1985-1987).

per cent and 13.1 per cent of total Medicaid expenditures (5).

For comparative purposes, the annual cost figures reported by Harris for several significant chronic illnesses widely prevalent in this country in 1991 can be seen below (6):

AIDS	$8.5 billion
Auto accidents	$8.0 billion
GI cancer	$4.9 billion
Lung cancer	$3.9 billion
Kidney disease	$3.2 billion
Breast cancer	$3.1 billion

AIDS will, no doubt, be among the most expensive health problems in the nation very soon. A key caveat of note here is that Harris' projections are based upon a lower estimate of AIDS total incidence (250,000 by 1991). Should the total be higher, the $8.5 billion mark will rise correspondingly.

In West Virginia, our cumulative AIDS caseload from 1981 is 57. If we employ the Public Health Service's Coolfont revised estimate of 323,000 AIDS cases by 1991, then West Virginia's share of the total at that time will be 290 (7). If CAMC continues to see 25 per cent of West Virginia's AIDS population, then the medical center's total will have reach 72. Providing that these trends continue into the future, the CAMC experience with AIDS will look like this:

CAMC Costs for AIDS Care (through 1991):

Total Patients: 72
Total Patient Days: 1,759
Total Patient Discharges: 137
Total Charges for Care: $1.07 million
Charges Likely to Fall to the Medicaid Program: $946,000
Adjusted for Inflation: $1.21 million

The above projections are based upon assumptions which are key to their predictive accuracy. These predictions, however, do not reflect any indirect costs, physician fees, or antiviral drug costs.

Were the CAMC experience extrapolated to the 290 West Virginia cases expected by 1991, the numbers would look like those seen below:

West Virginia AIDS Cost (through 1991):

Population with AIDS: 290
Total Hospital Discharges: 551
Total Patient Days: 7,244
Total Charges: $4.3 million
Charges Likely to Fall to the Medicaid Program: $3.78 million
Adjusted for Inflation: $4.84 million

Planning Needed

In light of the fact that we expect to see the rise in AIDS cases in West Virginia to occur largely as a function of native West Virginians returning to the Mountain State, the Medicaid-AIDS linkage will place an added burden upon the state's insurance system. While there is still some time to plan, the state government, hospitals, and third-party payors, working together with community leaders, would do well to consider some of the following pro-active steps toward managing West Virginia's version of the AIDS epidemic.

A. Adopt a case management approach in the clinical areas for all *seropositive* patients. This is a strategy employed by several third party payors in regard to PWAs, and has returned an average of 8:1 to 11:1 per dollar invested. Such a case management strategy is currently being employed in CAMC's Hematology-Oncology Unit. As 16 per cent of all Americans have no health insurance, and 23 per cent of poor Americans have none, case management seems the prudent course.

B. All seropositives and PWAs should be tracked via a registry mechanism, thereby allowing for ready and confidential access to natural disease history, response to treatment, and economic information.

C. In most tertiary health care systems seeing and managing both seropositives and PWAs, there has been an extraordinary over-reliance upon the acute care hospital as the primary vehicle for service. As a result, little has been done in developing alternative systems of care for PWAs such as skilled nursing units, home care agencies or hospice. Such systems already present a proven record of low-cost, high-quality care to the chronically ill.

Due to the relatively small size of the AIDS population encountered by CAMC, there does not yet seem to be a need for a free-standing AIDS unit/home operated solely by the medical center. For example, the expected discharges for all AIDS patients seen at CAMC between 1985 and 1991 will represent only 0.07 per cent of all CAMC discharges seen during the same period. There may be merit, however, in developing a centralized living center for PWAs which could be accessed by the entire state population. The planning and fiscal support for such an enterprise would demand significant cooperation from government, health care, third-party payors, private philanthropy,

and business/industry. Such a living center could save hundreds of thousands of dollars while assuring compassionate, sensitive care for those who could benefit from such a living arrangement. This should not be construed as some kind of quarantine strategy, but rather seen as a safe haven for PWAs and their significant others who could come and go as they were able.

D. A close watch must be kept upon implementing institution-wide policies on universal precautions or "body substance isolation" (BSI). Such strategies are designed to minimize risk to primary health care workers from work-related exposure to HIV and other infectious agents. While the cost-benefit of implementing such a program in a San Francisco hospital with an HIV-seropositivity of 1.5 to five per cent is obvious (8), the wisdom of implementing the same system in an area of 0.01 per cent in West Virginia is suspect. Such a practice is especially subject to criticism now that the Center for Disease Control has reclarified its position on the appropriate use of universal precautions:

"Universal precautions do not apply to feces, nasal secretions, sweat, tears, urine, and vomit unless they contain visible blood. The risk of transmission of HIV-1 and HBV from these fluids and materials is extremely low or non-existent. HIV has been isolated and HBsAg has been demonstrated in some of these fluids; however, epidemiologic studies in the health care and community settings have not implicated these fluids or materials in the transmission of HIV-1 or HBV infections (9)."

Isolation Policy Costs

The following discussion will illuminate the costs involved in implementing a body substance isolation policy in a large, tertiary medical center:

Costs of BSI or Universal Precautions:

Total Number of Care-Givers Touching Patients Each Day: 1,100
Number of Glove Changes per Day per Care-Giver: 20
Cost of a Single Glove Change: $0.10
Total Cost per Day for Medical Center Given 50-per cent User Compliance: $1,100
Glove Costs per Year: $401,500

Again, reflecting upon an earlier figure addressing institutional charges for AIDS care and comparing those to the costs of BSI, a striking fact appears. It will be over twice as costly to implement BSI as it will cost to care for the patients seen at CAMC with AIDS over the next four years:

CAMC charges for direct patient care of PWAs, 1985 to 1991, allowing for seven-per cent annual inflation will be: $1.21 million.

BSI/Universal Precaution Costs, 1988 (onset) through 1991, allowing for seven-per cent annual inflation will be: $1.61 million.

"Unfortunately, it is only a matter of time before HIV infections become a prominent health concern for West Virginians."

With West Virginia's HIV incidence of 0.01 per cent, the odds of encountering a seropositive person are one in 10,000. For CAMC, with its 38,000 discharges per year, its staff will come in contact with approximately four "invisible" seropositives each year. This projection may be slightly conservative due to the apparent tendency for hospitalized patients to have a slightly higher seropositive rate than the general public. Indeed, certain subpopulations such as young, sexually active males have evidenced higher seropositive rates than the population at large. Still, the cost-benefit issue needs to be more critically reviewed by hospitals than it has been so far.

West Virginia Advantage

Judging from both institutional and community experience, West Virginia will not suffer from the rigors of having to cope with the nature of the AIDS epidemic to the same degree as have other states. This is some comfort to a state with a health care delivery system constantly on the financial ropes. Another recently developing trend occurring on a national scale will also be helping West Virginia. With the massive movement of private and government dollars for AIDS research and care, HIV-infected persons are less likely to be driven out of their home environments in search of housing, food and health care. We identified earlier the principal motivating cause for our sample's return to West Virginia as being related to an exhaustion of basic resources in their states of origin. If PWAs could access basic resources in other environments, they would be less likely to return to the Mountain State.

TABLE 5
Estimated Costs of Mandatory Screening of All CAMC Admissions

CAMC Admissions 1987	38,000
Cost of ELISA for all patients	$570,000
plus 2,000 repeats	$30,000
plus 100 Western Blots	$2,800
Total Costs	$602,800

Statistically, a significant slowing in the growth of the population with AIDS diagnosed in West Virginia has recently become apparent. Only 12 to 15 new cases have been added to the state roles in the last year. Unfortunately, it is only a matter of time before HIV infections become a prominent health concern for West Virginians. Given our high teenage pregnancy rate, our high dropout rate, our mountainous terrain, the accelerating closure of health care facilities and primary care systems, and a lack of wellness-oriented health care initiatives presently, our people, especially our youth, are particularly vulnerable to the epidemic. If HIV finds its way into our isolated, rural lifestyle, we may never rid ourselves of it. Even now, as some of our physician colleagues begin to report the first of what they believe to be home-grown, endemically-acquired, HIV-seropositive persons, we are urged to hurry forward with a plan to save ourselves.

You see. . .the virus is already in our midst.

Estimating a seroprevalence rate of 0.01 per cent, a yield of 3.8 seropositives would have been found in the general hospital population in 1987, making the cost per seropositive $150,700. It is anticipated that this testing would be rejected by third-party payors due to lack of medical necessity. Such a ruling would transfer all attendant costs to the hospital. Providers also would do well to appreciate that litigation would follow in the forms of both invasion of privacy and reporting of false positives.

Counseling Costs Added

The numbers in Table 5 do not contain any reference to the education and counseling component commonly accompanying the HIV testing. Such counseling and teaching have become the standard of care in practically all hospitals and clinics, and when included with the figures in Table 5, show a total cost of:

Counseling at $14.00 per hour, 30 minutes per patient =

38,000 x $7.00 = $266,000

In adding these costs to the above testing costs, the total comes to:

	$602,800
	266,000
Total direct cost to CAMC in 1987 =	*$868,800*

or

$217,200 per seropositive found

Acknowledgement

The author wishes to thank Don Hager and Doug Mooney for their finance assistance, Harold Selinger, M.D., for his technical assistance, and Robert Savage for his encouragement.

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Caveney Health Care Voucher System

Nationwide in 1986, a total of $458 billion was spent for health care. Of this expenditure, the United States government spent $134.7 billion, and this government amount is expected to rise to $498.6 billion by the year 2000 under the present system. The government currently provides medical assistance and treatment to many eligible citizens at great expense to the treasury without universal acceptance by the medical community due to paperwork and sometimes outdated or reduced fee scales. The health professionals then pay income tax on the money received from performing these procedures.

Repeated attempts have been made to make health care exclusively the national government's responsibility. This does *not* seem advisable when countries such as the Soviet Union and China are attempting to change their health care systems to parallel the current United States system, realizing that rewards and free enterprise are great motivators for the public welfare. Technological advances occur when individuals and organizations are encouraged to provide a better product or service for a profit.

I have been to two countries, Australia and New Zealand, where there is a National Health Scheme that provides health care to the general public. They do provide some excellent care in numerous hospitals and facilities for major procedures. However, for the general non-emergency patient, there were waiting lists with as many as 4,000 patients for some elective procedures. This is unacceptable!

Recent concern about national health care has led the Institute of Medicine, a division of the National Academy of Sciences, to study and clearly define public health as a profession, as a governmental activity, and as a commitment of society. On the issue of care of the indigent, "the committee endorses the conclusion. . . that the ultimate responsibility for assuring the equitable access to health care for all, through a combination of public and private sector action, rests with the federal government."

If the Academy's plan and recommendations are the direction that is to be taken, I have an innovative and appropriate proposal for the health care delivery system. Utilizing my new medical health care policy, government-approved eligible patients would go to the health provider of their choice and be treated as traditional patients. The major difference from the present policy versus the Caveney Health Care Voucher System would be that no funds would change hands. The provider would be given credit for a specific medical service for an eligible citizen, and a fee voucher slip would be given to the doctor. This tax credit voucher could be applied against the income tax return of the medical practitioner. For example, if a medical operation is currently provided for a fee of $1,000, the government ultimately pays the provider that amount following considerable paperwork and delay. Under my Health Care Voucher System, the provider would receive a credit or voucher for a $1,000 procedure to be applied as a tax credit on the individual doctor's tax return. With the current highest tax rates of a 28-per cent to 33-per cent bracket, the government could receive this treatment of the disadvantaged citizens for $280 to $330 nstead of $1,000. This results in a triple-win situation: Patients would be more freely treated by the practitioners of their choice, the government would save money, and the practitioners would feel that they are receiving credit for their work.

Mathematical parameters and guidelines would have to be established to place a ceiling on the amount of deductibles, but with "Yankee ingenuity," I feel that the country would see a rapid and drastic reduction in the resistance to treat the indigent. Communicable diseases would be gradually reduced due to earlier diagnosis and treatment, medical health costs could eventually be contained, and a new enthusiasm for the health care profession would emerge (currently there is a serious reduction in qualified applicants to the health field). A healthier population would provide the United States with a better work force and would allow this great country of free enterprise to maintain its premier position in the world of health care.

Scott Caveney*
Wheeling

**Note: Caveney, a sophomore in pre-med at West Virginia University, is author of the Special Article, "Molecular Integrity of Aspirin in Relation to Reye's Syndrome," published in the Journal, May, 1988. He was selected as a finalist from WVU for the National Truman Scholarship on the basis of the above essay, grades, extracurricular activities, and interviews.—Ed.*

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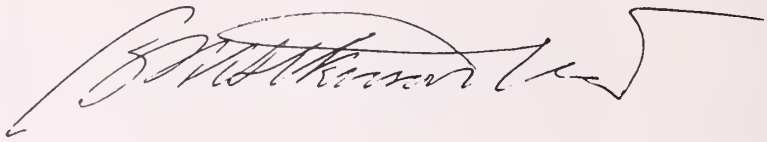
President's Page



"This type of 'revenue enhancement' could be used to fund Medicare fully at last year's level and have $2 to $3 billion left over."

The Sin Revenue Enhancement or 'Sin Tax'

The new proposed budget of the Bush administration has a five-billion-dollar ($5,000,000,000) cut in Medicare. How can this be with an increasing number of citizens reaching the age of 65 each year? We all know that the increase in costs of Medicare are not from increase in doctors fees or hospital costs, but are for increased utilization of services and increased numbers of Medicare recipients who receive those services.

Congress has given extended benefits of Medicare coverage in "The Medicare Catastrophic Coverage Act of 1988," which was designed to protect senior citizens from catastrophic health care costs and paid for by an income tax surcharge on Medicare recipients. This is the first time that Medicare recipients have received a benefit for which they are responsible for the funding. There is now a move on in the 101st Congress to repeal this fledgling statute. Almost 40 organizations for the elderly have formed a coalition to try and repeal or change the new "tax" on the senior citizens.

The President says that there will be no new taxes, but wait, is there a way to increase revenue without new taxes? Yes, don't call it a tax but a "revenue enhancement" and place it on products that are injurious to the health of the American people. This would bail out the Bush administration and improve the health of America. This would be a new emphasis on health policy and would not tax most of the populace, but would only penalize a small percentage—the people who smoke and drink.

The revenue raised from the "sin tax" would be small compared to the national budget, but it is estimated that $7 to $8 billion dollars could be raised by doubling the present tax on cigarettes and alcoholic beverages and adding 65 cents per case of beer. This action would help promote a healthier America and save health care costs since 350,000 deaths a year are due to lung cancer and other tobacco-related diseases.

The overall cost for tobacco usage in this country from higher medical bills, time lost from work and death is $65 billion dollars per year. Excessive alcohol consumption is related to cirrhosis and is a major factor in automobile deaths. Since many of the health care needs of our elderly are the result of their previously errant life styles, it seems only fair that the industries whose products contribute to those health problems should be heavily taxed. It would not bother me to see the tax tripled on tobacco products and see the government end all support to tobacco farmers.

These kinds of taxes in the past have had a tough time in congress because of the heavy lobbying by the tobacco and distilled spirits industry. And, these industries are already getting ready for a fight. This type of "revenue enhancement" could be used to fund Medicare fully at last year's level and have $2 to $3 billion left over.

—Bill M. Atkinson, M.D.

Doctor Bashing

Doctors charge too much, are too rich, treat people like numbers, are too remote, are too busy. Doctors are always playing golf. They spend shameless amounts on lobbying.

Doctor bashing is a relatively new term contrived to describe what is probably an old phenomenon—complaints about doctors and the medical profession in general. What is new is the orchestration of these complaints and their promotion, management and direction by other organized groups having some self interest in the results of such efforts.

Our communications media, aimed and directed, have enormous power, influence and effect. How many times do you hear of "sharp rises in medical costs"?—"sky-rocketing physician fees"? Or a character in a T.V. play asking "What do doctors know anyhow?" How many references to doctors and golf or long stories about doctors being sued? How many times have you read or heard editorial comments to the effect "doctors need to police their own ranks"?

No investigative zeal or cleverness is required to identify which parties might have a stake in doctor bashing. The biggest critic and worst enemy of American medicine today is, alas, our own government. The health insurance industry certainly ranks second, and the legal profession spearheaded by plantiff's attorneys is a good solid third. Probably in the fourth spot is a variety of very liberal social advocacy groups.

Government is medical enemy number one because Medicine has available treasures the public craves—health, long life, comfort, relief of pain and reassurance, and in their never-ending quest for votes, political office holders want to barter these treasures in exchange for votes. In every election campaign they make promises of cheap and plentiful medical care they cannot fulfill because they cannot pay the tab unless they hijack the treasures or make the voters pay for them via taxes. The latter is a highly unpopular and politically unlikely option, leaving only the former, in the form of Medicine, to be hijacked.

We are the ones who are to pay the promissory notes. We are to be, in effect, sold into a form of bondage—required to work in a manner, at a place, for an amount dictated by others. By daring to resist we have become the target of vilification and calumny.

We are supposed to be pleased and happy that we are allowed to negotiate the terms of bondage via RBRVS (Resource-Based Relative Value Scale) discussions. We could be negotiating a system providing government with a ratcheting mechanism that will apply increasingly stringent controls on Medicine to the point that all good things medical will issue forth from a political benevolence.

Doctor bashing is other than a symptom of pained public regard for doctors and Medicine in general. It is a contrived assault designed to put Medicine on the defensive, a campaign currently having some success.

There is no defense other than to maintain pride, dignity and the certainty that what we do, how we do it and what we get in return are all good and just.—SDW

Fairness

During a malpractice trial, the defense may not enter into the proceedings any information that relates to any compensation the plaintiff may have received as a result of the alleged injury.

Plaintiffs' attorneys take the stand that the collateral source rule is a good rule. They argue that if the plaintiff received insurance money, he's entitled because he paid for the insurance. If he received a Compensation settlement, he's entitled, they say, because he was covered by his employer.

These arguments do have some substance. It may well be that the individual is indeed entitled to these collateral source funds in addition to any sum which he may receive by settlement or court award.

But, is it fair for the jury to be kept in the dark about such payments? Isn't the purpose of the trial to present all the facts so the jury can make an honest judgment?

My friends, the trial attorneys, say they have great faith in the inherent fairness of juries to make proper and intelligent decisions. One wonders then why they feel juries are not capable of fair decisions simply by learning about the payments the plaintiff may have received as a result of injury?

The courtroom is the place to reveal all the relevant information. And certainly, it can't be said that collateral payments for an injury are irrelevant.

Fairness and common sense suggest that the collateral source rule should be abandoned. Let's do it now.—DZM

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Fatter Than Ever

American children and youth are the fattest they have ever been in history, and the rates of obesity are continuing to rise, an expert from the Harvard School of Public Health said last fall at The American Dietetic Association's (ADA) annual meeting.

Steven L. Gortmaker, Ph.D., Associate Professor and Acting Chairman of the school's Department of Behavioral Sciences, said he is concerned because obesity rates are continuing to rise. National studies conducted from the 1960s to the 1980s show a substantial increase in obesity, according to Gortmaker. Among children between the ages of 6 and 11, the rate of increase was 54 per cent, and among children between 12 and 17, an increase of 39 per cent was reported.

Both boys and girls of every race are affected. While blacks and children living in poverty have historically been less obese, Gortmaker said those differences have narrowed in the last 20 years. There are still some regional differences, with children in larger cities in the northeast and north central states tending to be heavier. "But what is striking is that the trend can be seen throughout the United States," he said. "Over the last 20 years, kids in this country have gotten fatter."

Much of the increase in childhood obesity can be attributed to lifestyle. "Dietary intake is the major component," Gortmaker said, explaining that increasing affluence means a greater availability of food. Other factors are the prevalence of fast food, and the constant reinforcement for consuming food, especially through advertising, and the role of food in American culture.

As children and adolescents have increased their food consumption, their activity levels have dropped. "One of the major forces leading to increased obesity is the tremendous amount of time youth spend watching television," Gortmaker said. "They spend as much time in front of the television as they spend in school. They aren't exercising."

Gortmaker cited a recent study indicating an association between television viewing and obesity in adults. Among 800 faculty, staff and students at the Harvard School of Public Health, those who watched television up to six hours a week had a four-per cent incidence of obesity, while 25 per cent of the subjects who watched television 21 or more hours a week were overweight.

Another major factor contributing to obesity in children is the prevalence of obesity in American society. Being overweight is often accepted as normal, he pointed out.

Many children lose excess weight at an early age, but those who remain obese through adolescence are likely to become obese adults. And while childhood obesity is associated with health risks such as elevated blood pressure and high cholesterol levels, Gortmaker said researchers have seen a lack of motivation on the part of young people to change their habits because the long-term health risks are quite a long way off.

He expressed concern about the continuing trend toward childhood obesity, and the resulting implications for increasing adult obesity. Gortmaker feels that a major problem is today's lifestyle. "We have moved to a lifestyle that is very low in activity and very high in consumption levels," he said. "I think a lot of people would like to lose weight if they could find an easy way. American culture constantly comes up with new ideas, and in that sense, I suppose we can be a little more optimistic."—*Guest Editorial by the American Dietetic Association.*

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New Convention Topics Announced

External Influences, Tight-Building Syndrome

Cantrell

Kobet

"External Influences on the Practice of Medicine" and building designs which contribute to allergies and other ills of the occupants will be among subjects presented during WVSMA's Annual Meeting August 16-20. The former paper will be given during the Friday morning, August 18, scientific session, by Robert W. Cantrell, M.D., University of Virginia; the latter paper, following Doctor Cantrell, by Robert J. Kobet, AIA, a Butler, Pennsylvania, architect.

The convention meeting site again will be the Greenbrier in White Sulphur Springs. Other discussion subjects planned will include uncompensated care, gastritis and peptic ulcer disease, disease prevention, and magnetic resonance imaging (MRI).

Doctor Cantrell, Fitz-Hugh Professor and Chairman, Department of Otolaryngology - Head and Neck Surgery at the University of Virginia since 1977, will review governmental, industrial and other influences on medicine in his paper.

The environmental effects of closed buildings (or the "tight-building syndrome") will be covered by Kobet in his talk, "Allergy-Free, Non-Toxic Environment: The Effect of the Built Environment on Our Health."

The remaining Friday morning speakers and topics, as announced previously, will be "Lyme Disease: The Latest Great Imitator," Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, West Virginia University Health Sciences Center, Morgantown.

Fellow, Past President

Doctor Cantrell, a native of Missouri, is a Fellow of the American College of Surgeons and Chairman of its Advisory Council, a Fellow and past President of the American Academy of Otolaryngology - Head and Neck Surgery and the American Society for Head & Neck Surgery, and a Fellow of the American Academy of Otolaryngic Allergy, American Laryngological, Rhinological and Otological Society, Inc., and American Academy of Facial Plastic and Reconstructive Surgery.

He also is a past President of University Otolaryngologists and Chairman of the Advisory Council for Otorhinolaryngology of American College of Surgeons.

Doctor Cantrell is a graduate of the U.S. Naval Academy, George Washington University, and received his M.D. degree in 1960 from George Washington. He completed residencies at New York Hospital, Cornell Medical Center, and at the National Naval Medical Center, Bethesda, Maryland.

Doctor Cantrell serves on the editorial boards of The Laryngoscope, Self-Instructional Packages, American Academy of Otolaryngology, Archives of Otolaryngology, and American Medical Association.

He is the author or co-author of some 100 scientific articles and 19 book reviews.

WVSMA President Bill M. Atkinson, M.D., is interviewed on television during WVSMA's Mid-Winter Clinical Conference January 27-29 in Huntington. See also photo layout on Page 108.

Kobet, a Registered Architect, is owner of Energy Design Associates in Butler.

He is the author of a number of publications on energy-efficient building designs. He was featured in a Changing Times Magazine article discussing allergy-free, non-toxic design, energy conservation and individuals subject to incidents of chronic illness that are environmentally induced.

In Practical Builder Magazine, he was featured in an article discussing allergy-free, non-toxic design, energy conservation, material selection, the "tight-building syndrome," and the relation of human ecology to energy conservation and alternative energy systems.

Kobet received a Bachelor of Architecture degree in 1977 from the University of Cincinnati. In 1977 he was recipient of the Progressive Architecture Award for Applied Research as Co-Author and Illustrator of the *Minimum Energy Dwelling (MED) Workbook.*

Co-founder and charter member of the Western Pennsylvania Solar Energy Society and a member of its Board of Directors, he has held teaching assignments and lectured at Butler County Community College, Community College of Allegheny County, State University of New York at Buffalo, University of Wisconsin, and Pennsylvania State University.

Kobet also was a lecturer for the American Academy of Otolaryngic Allergy on allergy-free, non-toxic design and the tight-building syndrome, and developed a course entitled "Allergy-Free, Non-Toxic Design" for the American Society of Interior Designers Professional Development Course.

Convention Schedule

The 1989 Annual Meeting will follow the usual pattern including the opening session of the WVSMA House of Delegates Wednesday, August 16, a keynote address Thursday morning, scientific sessions Thursday, Friday and Saturday mornings, section and society meetings primarily on Friday, and the second House session Saturday afternoon. A presentation on computer diagnostics is being planned for Friday afternoon. Social and other convention activities will be announced.

Members of the 1989 Annual Meeting Program Committee are Drs. Michael J. Lewis, Morgantown, Chairman; James L. Bryant, Clarksburg; C. Richard Daniel, Beckley; Derrick L. Latos, Wheeling; Michael A. Morehead, Parkersburg; Maurice A. Mufson, Huntington, and Stephen L. Sebert, Lewisburg.

Dyslexia Subject of Conference

The Huntington Area Association for Children and Adults With Learning Disabilities will hold its annual conference March 10-11 at the Gateway Holiday Inn Conference Center in Barboursville. Entitled "Learning, Let's Turn Things Around," the conference welcomes Dr. Charles Drake, educator and speaker.

As founding headmaster of the Landmark Schools, the country's largest educational program for dyslexics, he was an early pioneer in the field of Learning Disabilities.

For more information concerning the program and other speakers, contact Susan Gillette at (614) 886-8476 or Judy Bloss at (304) 522-3860.

Urology Society's Guest Speakers

Five featured guest speakers will participate in the annual spring meeting of the West Virginia Urological Society, March 31-April 2, in Huntington at the Hotel Radisson.

They are Drs. Willet Whitmore, Jr., Memorial Sloan Kettering Cancer Center; Charles Brendler, Johns Hopkins Hospital; Jay Gillenwater, University of Virginia; James Lingeman, Methodist Hospital, Indianapolis, and Henry Wise, Columbus, Ohio.

Topics to be discussed will include updates on prostate cancer and lithotripsy.

For further information, contact the President, Rocco A. Morabito, M.D., 2828 First Avenue, Suite 305, Huntington 25702.

"Yes. . . I'd say there have been side effects with the medicine. . . I had to get a second job to pay for it."

Education, Visitation a Good

Getting ready for the opening session on "Occupational/Industrial Medicine" at the Mid-Winter Clinical Conference are, from left, Mario C. Battigelli, M.D., Morgantown, speaker; WVSMA Executive Director Merwyn G. Scholten, John E. Jones, M.D., Morgantown, Moderator, and William O. McMillan, Jr., M.D., Charleston, Program Committee Chairman.

Attendees visit and compare notes in this general coffee break scene during WVSMA's 22nd Mid-Winter Clinical Conference January 27-29, held for the first

Enjoying a break in the left photo are David R. Hess, M.D., Bridgeport, and Bill M. Atkinson, M.D., Parkersburg, WVSMA President. Going over the program on the right are Shawn Chillag, M.D., Moderator of the session, "Potpourri of Topics," and speaker Elizabeth A. Funk, M.D., both of Charleston. Doctor Funk's topic was "Sociopolitical Aspects of AIDS."

Mix at WVSMA's 'Mid-Winter'

time in Huntington instead of the usual site, Charleston. Attendance at the CME event totalled 297 including 185 physicians, 82 exhibitors and others.

Waiting to be introduced are the speakers for the Physician Session, James E. Todd, M.D., Chicago, AMA Senior Deputy Executive Vice President, left, and Don R. Sensabaugh, Jr., Charleston, WVSMA Counsel. The topic was "AMA's Alternative to Tort Reform."

"Benefit Management Program" (Blue Cross/Blue Shield) was discussed by the speakers on the left, Janet G. Reed, R.N., M.S., Charleston, and Thomas S. Clark, M.D., Morgantown. Enjoying a lighter moment on the right are Larry C. Smith, M.D., left, Huntington, President Elect of the Southern Medical Association, and Bill Ferguson, exhibitor.

A Report to Members

WVSMA 1988 Financial Picture Reflects Growth, Activity

WVSMA Councilors attending the first Council meeting of 1989 on January 22nd heard a detailed financial report from WVSMA Treasurer William C Morgan, M.D., and the Executive Committee.

The report reflects the continued growth of WVSMA and its various activities on behalf of the membership and was enthusiastically received by Council. Both Council and the Executive Committee expressed appreciation to the Treasurer and staff for their work in presenting the 1988 financial report in such detailed clarity.

President Bill Atkinson, M.D., reported to Council that the Executive Committee had extensively reviewed the special "line item" audit done by Ernst & Whinney as ordered by the House of Delegates at the annual meeting in August. The audit covered all travel expenses for officers and staff as well as expenses incurred for the annual and midwinter meetings. "The auditors found no irregularities or inappropriate expenditures, but they did recommend several changes in documentation and reporting procedures which the Executive Committee has already approved." noted Doctor Atkinson.

Credit Cards, Receipts

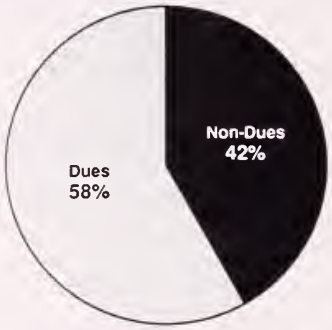
Among the changes were elimination of corporate credit cards for officers and staff and adoption of a requirement that all expenditures greater than $25 be accompanied by a receipt showing the nature or detail of the expenditure, ie, the actual hotel bill rather than just the American Express receipt copy. The exception to this rule would be mileage reimbursement and minimal expenditures below $25 for parking, road tolls, taxi, etc.

In presenting the 1988 budget review (see accompanying pie charts), Doctor Morgan noted that fully 42 per cent of the 1988 revenue came from non-dues sources including registration fees, exhibit space sales, interest, advertising, rent and various marketing and educational activities (loss control, insurance coding seminars).

The report noted that had not WVSMA received the various amounts of non-dues income (and assuming the same number of dues paying members) it would have been necessary to have collected an additional $225 from every member in dues in order to provide the same level of services and activity.

WVSMA REVENUE:

Where Does The Money Come From?



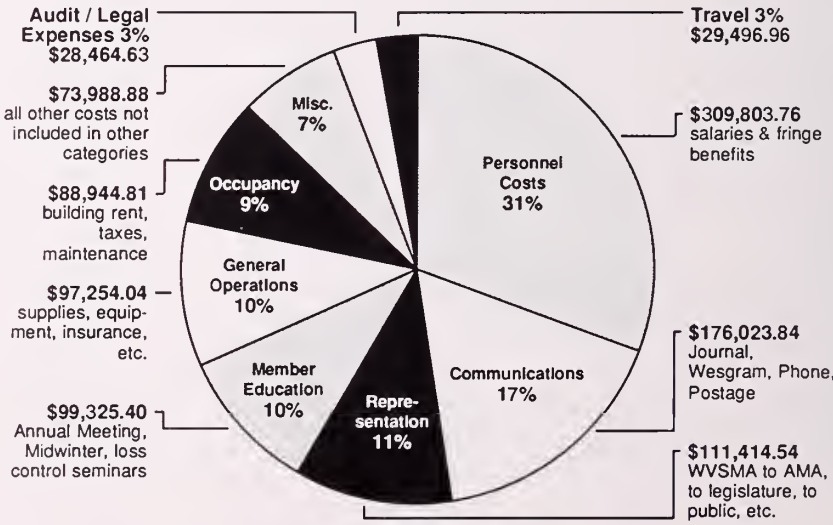
Dues	$587,290.89
Non-Dues	$428,575.37
Total 1988 Revenue	**$1,015,766.26**

Where Non-Dues Revenue Comes From:

Educational Activities	$88,865.20	9%
Interest	$59,138.54	6%
Publications (Advertising)	$48,398.19	5%
Rent	$5,178.75	0.5%
Scholarship Repayment	$11,050.00	1%
Endorsements/ Marketing Act.	$201,550.28	20%
All Other Miscellaneous	$14,394.41	1%

WVSMA 1988 BUDGET SUMMARY:

Where Goes The Money?



TOTAL EXPENDITURES: **$1,014,716.86**

In reviewing the 1988 expenditures, Doctor Morgan presented a summary of expenses in nine categories ranging from personnel cost to audit and legal expenses. The report noted that WVSMA personnel costs including salaries and fringe benefits amount to 31 per cent of the total expenditures, a figure somewhat lower than the averages reported in two different national studies for medical associations (34.5 per cent by ASAE & 35.4 per cent, salaries only, by AAMSE) in 1987.

Doctor Morgan also noted that occupancy costs (rent, property taxes, etc.) were somewhat higher than the average expended by similar-sized medical associations due to the fact that WVSMA is paying rent on the new headquarters building sufficient to purchase the building in 20 years at which time the percentage cost of occupancy will drop significantly.

Two major items which pushed expenditures over anticipated levels were the advancement of the balance of the PPO loan ($45,000) which had been authorized in 1986 but not required until 1988, and the payment of $16,389 in legal and accounting costs related to the continuing Journal tax case.

Expenses in Line

Other categories of expenses fell very closely in line with those of similar organizations. Despite ever-increasing travel costs, WVSMA managed to expend only three per cent of its budget on travel compared with a national average of 4.6 per cent even though more officers and leaders are actively involved with the AMA including the Annual and Interim meetings of the House of Delegates as well as the annual leadership and state legislation conferences.

Appended to the report is an historical perspective of anticipated and actual revenues received by the Association since 1984 including the percentages of dues and non-dues income.

Any member desiring a copy of the report showing the information in somewhat greater detailed breakdowns may request same from WVSMA.

AAFP Plans Special Events at Meeting

Some 19 physicians and health care personnel from 12 states and the District of Columbia will be on the faculty for the 37th annual scientific assembly of the West Virginia Chapter, American Academy of Family Physicians April 14-16.

Medical subjects ranging from infectious disease to hair growth will be discussed during the two-and-one-half-day CME conference to be held at the Sheraton Lakeview Resort in Morgantown.

Wilbur Sine, M.D., Morgantown, is President Elect and Program Chairman.

This program has been reviewed and is acceptable for 16 prescribed hours by the AAFP, and AMA for 16 hours toward the Physician's Recognition Award in Continuing Education. AOA credit toward category 2-D for 16 hours is also approved.

The program objective is to provide family physicians with an update on diagnosis and treatment of commonly encountered medical problems.

Preconference activities will include a golf tournament and tour and tea at the WVU Health Sciences Center including a "hard-hat" look at the Mary Babb Randolph Cancer Center and Ambulatory Services Thursday, April 13, 3-5 P.M. Following will be Dean's Welcome Wine and Cheese reception at Lakeview, 6-7 P.M.

Other special events will include an All Member Party Friday, 6:30-8 P.M., featuring country folk musician and singer Roger Bryant, and the annual banquet Saturday, 7 P.M.

(See February issue of the *Journal* for scientific speakers and topics.)

For additional information, call West Virginia Chapter AAFP at (304) 776-1178.

WVSMA's first legislative reception in Charleston February 7 was "A.O.K.," most agreed. Some 65 West Virginia doctors and legislators were attracted to the "after-dinner dessert" affair including, in the left photo, Del. Peggy Miller, R-Kanawha (left) and Mabel M. Stevenson, M.D., Huntington. In the background, Charleston Gazette report Phil Kabler interviews Charles E. Turner, M.D., Huntington (partly hidden). On the right, Del. Henry (Hoppy) Shores, R-Kanawha, left, and three local doctors take time out from conversation to have their picture snapped. The doctors are, from left, Constantino Y. Amores, a WVSMA Councilor, and William C Morgan, Jr., WVSMA Treasurer, both of Charleston, and Joseph A. Smith, AMA Delegate, Dunbar.

Poetry Corner

Away

Even though I feel you near,
Perhaps just in the upstairs hall,
I hear not what I want to hear.

Sometimes it seems so very clear
Yet far away, a distant call,
Even though I feel you near.

It is quite akin to fear
To listen for your close footfall,
I hear not what I want to hear.

Was it really yesteryear
That we watched our last snowfall,
Even though I feel you near?

Even though I strain my ear
For every sound, both large and small,
I hear not what I want to hear.

You have escaped from me, my dear,
I cannot bring you back at all.
Even though I feel you near
I hear not what I want to hear.

Robert L. Smith, M.D.
Morgantown

Editor's Note: This is an excellent example of a poem form called villanelle.

Journal Committee Appointments

Harvey D. Reisenweber, M.D., Martinsburg, has been named to the Publication Committee of the *Journal* as an Associate Editor.

Doctor Reisenweber, a family physician, was appointed to fill the unexpired term of the late L. Walter Fix, M.D., Martinsburg, who died June 3, 1988. His term will expire December 31, 1991.

Appointments also were made to the two resident and two student positions on the Committee.

The resident members are Harry E. Hicklin III, M.D., Huntington, and Barbara M. Schroeder, M.D., Morgantown.

Student members are Leon B. Briggs, Jr., Huntington, Marshall University School of Medicine, and John D. Juriga, Morgantown, West Virginia University School of Medicine.

The residents and students were appointed for two-year terms, effective January 1, 1989, through December 31, 1990.

Doctor Reisenweber began his duties last fall.

Doctor Hicklin began a three-year fellowship program in cardiovascular medicine at MU last July.

Doctor Schroeder is a first-year resident in ophthalmology at WV.

Members of the Publication Committee, which oversees production of the *Journal*, review scientific articles submitted for publication in the *Journal* and write editorials for the *Journal* among other duties.

All appointments were approved by WVSMA's Council.

Other members of the Committee are Drs. Stephen D. Ward, Wheeling, Chairman and *Journal* Editor, and Vernon E. Duckwall, Elkins; John M. Hartman, Charleston; Joe N, Jarrett, Oak Hill; David Z. Morgan, Morgantown, and Mable M. Stevenson, Huntington, all Associate Editors.

The outgoing resident and student members were the first residents and students to be named to the Committee in 1987. The residents are David R. Ayers, M.D. (now practicing in Point Pleasant) and Vicki Williams, M.D., Morgantown. The students are Rebecca A. Price, WVU, and William White II, MU.

Medical Meetings

March

1—WVSMA Loss Control Seminar, Second Generation, Charleston.

18—WVSMA Loss Control Seminar, Second Generation, Morgantown.

19-23—Am. College of Cardiology, Anaheim, Calif.

19-24—Am. Society for Clinical Nutrition, New Orleans.

19-24—Am. Assoc. of Immunologists, New Orleans.

19-24—Am. Assoc. of Pathologists, New Orleans.

23-26—Am. Medical Student Association, Las Vegas.

31-April 2—WV Urological Society Spring Seminar, Huntington.

April

2-5—Am. Society of Abdominal Surgeons, Tampa, Fla.

13-16—Am. College of Physicians, San Francisco.

14-16—West Virginia Chapter, Am. Academy of Family Physicians, Morgantown.

22—WVSMA Loss Control Seminar, First Generation, Bluefield

27-29—WV Chapter, Am. College of Surgeons, White Sulphur Springs.

28-30—International College of Surgeons—U.S. Section, San Francisco.

May

7-12—Am. Roentgen Ray Society, New Orleans.

11-14—Am. Geriatrics Society & Am. Federation for Aging Research Annual Meeting (46th), Boston.

14-17—Am. Thoracic Society, Cincinnati.

17-19—Am. Trauma Society, Washington, DC.

21-23—Am. Society of Clinical Oncology, San Francisco.

July

16-22—10th World Medicine Games, Montreal.

August

16-20—122nd Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Mar. 17-18, Living With Cancer: Oncology Update '89

April 8, Fourth Medicolegal Investigation of Death Seminar—Blood Stain Pattern Analysis

April 21, Ethical Issues in the Health Care of the Elderly

May 5-6, Medical Management of Respirator Use

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Mar. 23, Skin Cancer, Kimberly Skaggs, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—Mar. 2, Lasers in Gastroenterology, Donald Seibert, M.D.

Mar. 23, Newer Imaging Techniques, William Higgins, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Mar. 9, Infantile Apnea, Ellen Z. Szego, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Mar. 15, Discussion of Diets, Jane Morley Kotchen, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Mar. 7 (no program)

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Mar. 1, Stress Management in Deliverers, Steven F. Dreyer, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—Mar. 16, Infertility, Sherif Awadalla, M.D.

Logan, • General Hospital, 11:30 A.M.—Mar. 17 (no program)

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Mar. 14, Trauma, James Kessel, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Mar. 21 (no program)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—Mar. 2, Neurological Complications in the Treatment of Hyponatremia, Jack Riggs, M.D.

Montgomery, • General Hospital, 12 P.M.—Mar. 1 (program tba)

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Mar. 9, Interstitial Lung Disease, Daniel Banks, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Mar. 9 (program tba)

Parkersburg, ★ Camden-Clark Hospital—Mar. 8, Lasers in Gastroenterology, Donald G. Seibert, M.D

Mar. 22, Tratment of Cancer with Immunological Modifiers, Anthony J. Murgo, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Mar. 10, Neonatology Update, Richard D. Landes, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Mar. 23, Neonatology Update, Richard D. Landes, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Mar. 21, Neonatology Upate, Richard D. Landes, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Mar. 7, Urinary Tract Infections in Children, Myra Chiang, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Mar. 14, Update on Lipid Metabolism, Irma Ullrich, M.D.

Mar. 28, Chemotherapy Synopsis—1989, Thomas Hogan, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Mar. 22 (program tba)

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Mar. 21 (program tba)

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Mar. 2, Update—Use of Laser in Surgery, Romeo Y. Lim, M.D.

Burn Injuries

"Initial Management of Burn Injuries," a CME program, will be held at United Hospital Center in Clarksburg April 5 at noon. I. William Goldfarb, M.D., Associate Director, Burn/Trauma Center, Western Pennsylvania Hospital, will be the speaker. One hour of Category 1 credit will be given by West Penn Hospital.

For more information, call Thomas M. Bozzuto, D.O., Chairman, Emergency Medicine, at 624-2323.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Multidisciplinary Pain Service New

A new, comprehensive pain service in Morgantown may help ease the suffering of people with chronic or acute pain.

WVU Hospitals and Chestnut Ridge Hospital offer a combined pain clinic for total health care involving physicians, psychologists and physical therapists.

Medical needs of outpatients are addressed through a program operated by WVU Hospitals while inpatient care is offered at Chestnut Ridge Hospital.

Richard H. Docherty, Assistant Professor of Anesthesiology and Director of the outpatient program, said the pain service deals with a variety of illnesses from cancer to headaches.

The Clinic also addresses the needs of people who have had back surgery but still suffer pain or people who were in a car accident and have recurring neck pain.

Patients Categorized

Upon admission to the program, Doctor Docherty said, patients are categorized as having either acute or chronic pain.

He said acute patients usually are seen within a 48-hour period and may have illnesses such as lumbar disc pain, shingles or reflex sympathetic dystrophy.

Chronic pain illnesses typically include headaches, lower back pain and a number of other long-term disorders.

Richard T. Gross, Assistant Professor of Psychology and Director of the inpatient program, said many of the patients have difficulty learning to live with pain. "The inpatient program is multidisciplinary, including medical, psychological and physical therapies," said Doctor Gross.

"We try to educate our patients and help them deal with the emotional and physical changes that go along with accepting a disability."

The inpatient clinic teaches biofeedback relaxation techniques and pain management skills, regulates medications and works on conditioning and strengthening.

Doctor Docherty said patients initially get a multidisciplinary evaluation and receive a diagnosis or several diagnoses. Next, a treatment is prescribed, possibly including medications, nerve blocks, physical therapy, psychological help or a combination of treatments.

Doctor Gross added, "These are people with real pain having difficulty dealing with it. That's why it's important that psychology works closely with physical therapy and medicine."

Outpatient Clinic

Although the outpatient pain clinic was opened in 1975, the inpatient center was just added last summer.

Since its addition, Doctor Docherty said, there has been greater success with the in-depth counseling program, allowing patients to return to work.

The clinic sees an average of 30 new patients and 120 return patients each month. Along with in-state patients, the clinic gets referrals from Pennsylvania, Ohio and Maryland.

Physicians in the program often act as consultants to local doctors around West Virginia and the region.

Doctor Docherty said the pain service is in the process of expanding in anticipation of a projected 30-per cent patient increase when the Mary Babb Randolph Cancer Center opens next fall.

Neuro-Eye Doctor Joins Faculty

Lenore A. Breen has joined the WVU faculty as Associate Professor of Neurology and Ophthalmology.

Doctor Breen formerly was in private practice in Dallas, Texas, and Clinical Assistant Professor of Ophthalmology and Neurology at the University of Texas Health Science Center. She also was on the internal medicine teaching staff at Methodist Medical Center in Dallas.

She currently is the only neuro-ophthalmologist in West Virginia fully trained to deal with neurological disorders associated with visual problems. These may include loss of vision or double vision caused by diseases such as multiple sclerosis or myesthenia gravis, partial vision loss or inability to understand what is seen caused by accidents or strokes, and genetic errors that affect vision in children.

"Neuro-ophthalmology is a fairly new subspecialty that has gained prominence because of the need for physicians who can communicate well in two very separate specialties," Doctor Breen said.

At WVU Earlier

Following completion of a fellowship in neuro-ophthalmology at Washington University School of Medicine in St. Louis in 1982, she came to WVU for a year before setting up private practice in Texas.

"When I left WVU five years ago, they tried to find another neuro-ophthalmologist to join the staff, but couldn't," Doctor Breen said. "So when I got the opportunity, I decided I wanted to come back."

Doctor Breen is involved with a research project studying how brain stem reflexes are altered with paralysis of nerves to eye muscles.

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CAMC

Women and Children's Hospital

Division of Charleston Area Medical Center

MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University

MU Given $528,000 Grant for Elderly

The Claude Worthington Benedum Foundation has given MU School of Medicine more than half a million dollars for a unique program designed to help the rural elderly live healthier, more independent lives, Foundation officials announced.

The $528,000, three-year grant will be used to develop the pilot program in Lincoln County and test its results, according to Beverly Railey Walter, Grants Program Director for the Benedum Foundation.

Marshall's program will supplement traditional medical care with home visits and personal health programs developed by a team which will include specialists in medicine, psychiatry, nutrition, rehabilitation and other related fields.

"In terms of meeting rural health needs, this is the most exciting program I've been involved with while I've been at the Benedum Foundation," said Mrs. Walter.

Team Approach

"The elderly can't be treated in a vacuum," she explained. "You have to go beyond the traditional to all of the social, cultural and medical aspects that make up human lives.

"We know that as people get older they have problems with nutrition, depression, home safety and accidents that land them in hospitals and nursing homes," she said. "That's why it's so important to have a team approach, along with the holistic aspects such as going into the homes and looking at safety and repairs."

MU President Dale F. Nitzschke said that although the program will operate first in a relatively small area, its potential impact is great

"We believe this program is unique in the way it adapts geriatric health care to areas in which there are limited health resources and people are widely scattered," he said.

"We have deliberately designed the program so that rural health centers any place can use the same concept. In fact, we want Marshall to become a national model for delivery of rural health-care services."

Nitzschke said that although the program is not directly tied to Marshall's recently opened Hanshaw Geriatric Center, both are part of the school's broader goal of improving the health of elderly people.

The program has several goals, said Robert B. Walker, M.D., its Director.

"First, we want to learn more about the problems of the rural elderly, especially in central Appalachia, and second, we want to make life better for these people," said Doctor Walker, who is Chairman of Marshall's Department of Family and Community Health.

The program will be based at the Lincoln Primary Care Center in Hamlin, which is affiliated with the School of Medicine. Mrs. Walter called the center "exceptional," and said Marshall's tie to such a center was essential to getting the rural geriatrics program funded.

Gerry Stover, Executive Director of the Center, said he and his staff are looking forward to working with Marshall on the program.

Doctor Walker said that 200 elderly Lincoln countians, about 10 per cent of the county's senior citizens, will be selected for the program.

Each participant will receive a thorough medical examination and will be asked about relevant social, economic and environmental factors. In addition someone will visit the participant's home to see what improvements are needed to provide healthier, safer living conditions.

Once this information is gathered, a geriatric health team made up of doctors and other health specialists will develop a health plan to help that person maximize health, independence and well-being. Then a physician's assistant will work closely with the individual to help carry out the plan, using existing community resources as needed to provide needed transportation, home repairs or other assistance.

Preventive Component

"The program will have a heavy preventive component and rehabilitation component," he said.

Doctor Walker said during the project's three years, the health of participants will be monitored and compared with the health of similar people who receive traditional health care at other community health centers.

"We'll be closely watching cost and well-being," he said. "We're not looking as much at length of life, because that doesn't necessarily correlate with quality of life. We don't just want people to live longer—we want them to live better.

School of Medicine Dean Charles H. McKown, Jr., M.D., said he's excited about the program for more than one reason.

"It follows and supports the mission and very nature of this school, but more than that, it addresses a specific need," he said.

Electronic Mail Service Started

The Health Science Library of MU School of Medicine has begun an electronic mail service which allows health professionals to obtain medical reference materials more quickly.

Through the new service, doctors and other health professionals can use their computers to request bibliographic searches, journal article copies, or interlibrary loans, according to Ed Dzierzak, Director and System Manager.

The phone number for the service is 696-2449. Users can make requests electronically 24 hours a day, seven days a week.

System users will need a personal computer and a modem designed to communicate with a 1200 baud system. They also will need a user identification number and password, which can be requested through the electronic mail service, by calling the library at 696-6426, or by writing Dzierzak at the Health Science Library, Marshall University, 400 Hal Greer Boulevard, Huntington, WV 25755-9210.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it, however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

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Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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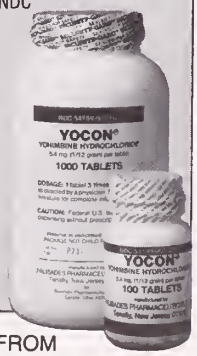

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1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

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Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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Obituaries

CHARLES L. LEONARD, M.D.

Dr. Charles L. Leonard, 35-year Director of the Randolph-Elkins Health Department, died January 8 in Elkins at his home. He was 68.

Doctor Leonard was Medical Director of Davis Memorial Hospital and founder of the health department in 1950, serving as Director until 1972 and from 1975 until his retirement last December.

Doctor Leonard, in 1955, traveled to Pittsburgh, Pennsylvania, and flew back bearing 1,000 doses of the vaccine which began the end of a polio epidemic that had stricken 23 area children. In addition, Doctor Leonard pushed for county-wide mass innoculations for measles, and he was among the first physicians to use an automatic injection gun.

In 1969, Randolph County was one of the first counties in the state to hold Pap clinics, and in 1971 family planning clinics were established under his direction.

A native of Beverly, Doctor Leonard went to Elkins after serving as a doctor in the Navy. A graduate of West Virginia University who also had attended Davis and Elkins College, he received his M.D. degree in 1943 from Temple University.

Doctor Leonard was President of the Tygart's Valley Medical Society in 1950, and was a member of the Council of the West Virginia State Medical Association in 1965-66.

Surviving are three sons, Charles L. Leonard II, Cincinnati; Brad Leonard, Clarion, Pennsylvania, and Parker Leonard, Gaithersburg, Maryland.

County Societies

CABELL

Members of the Executive Committee of the Cabell County Medical Society and representatives from the Cabell County Medical Auxiliary met with Cabell/Wayne County legislators January 14 at the Holiday Inn-Gateway.

Members of the group discussed the legislative proposals of the West Virginia State Medical Association. and the state's financial condition.

Each legislator spoke about matters of importance to him/her.

MINGO

Bill Morgan, M.D., of Mount Sinai Medical Center, Miami Beach, Florida, was guest speaker for the meeting of the Mingo County Medical Society November 9 in Williamson.

His subject was "Intraabdominal Abscess/Sepsis."—Pastor C. Gomez, M.D., Secretary-Treasurer.

McDOWELL

The McDowell County Medical Society met January 18 at Welch Emergency Hospital. Discussion was held regarding possible new state restrictions on physician dispensing.

The Society approved a motion making all meetings of the Society smoke-free.

County physicians again will be asked to serve on a speakers' bureau for the Society.—Jeffrey P. Palmer, M.D., Secretary.

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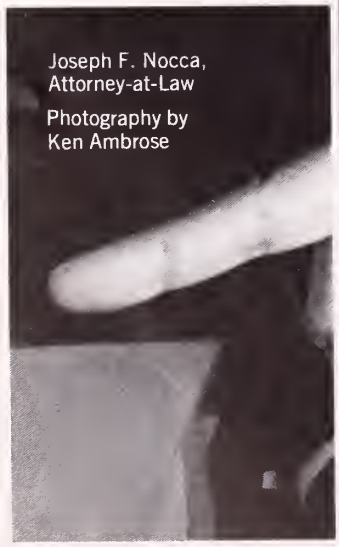

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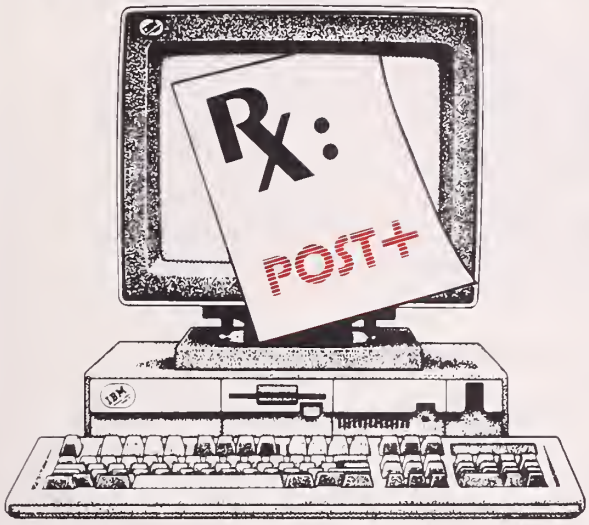

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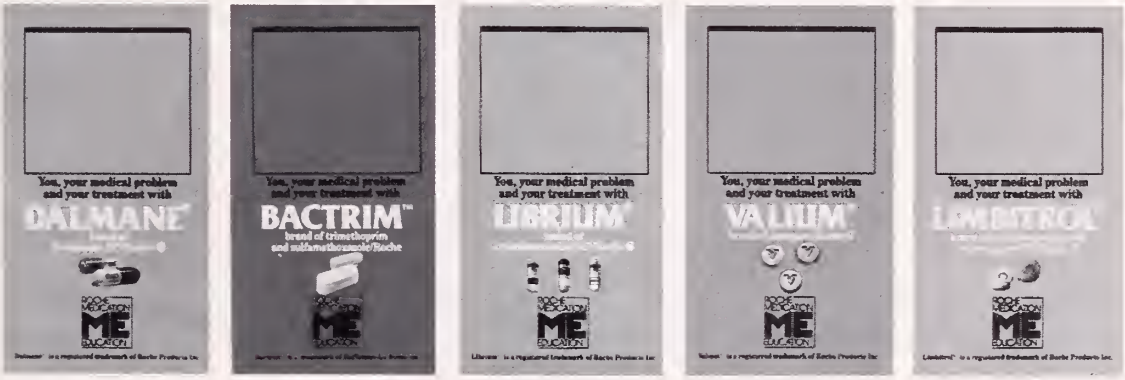

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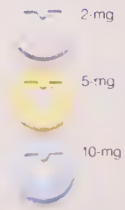

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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USPS 676 740
ISSN 0043 - 3284

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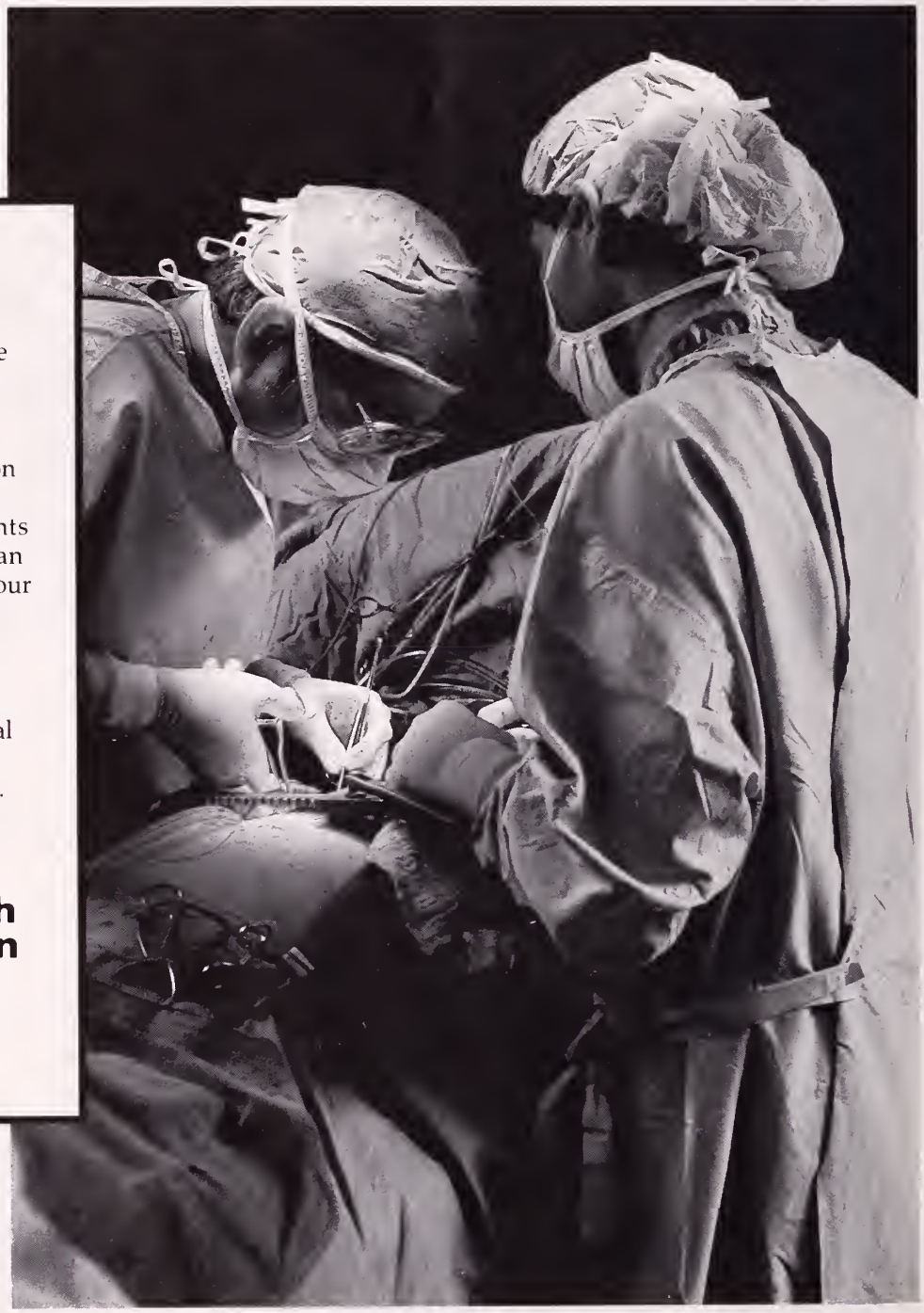

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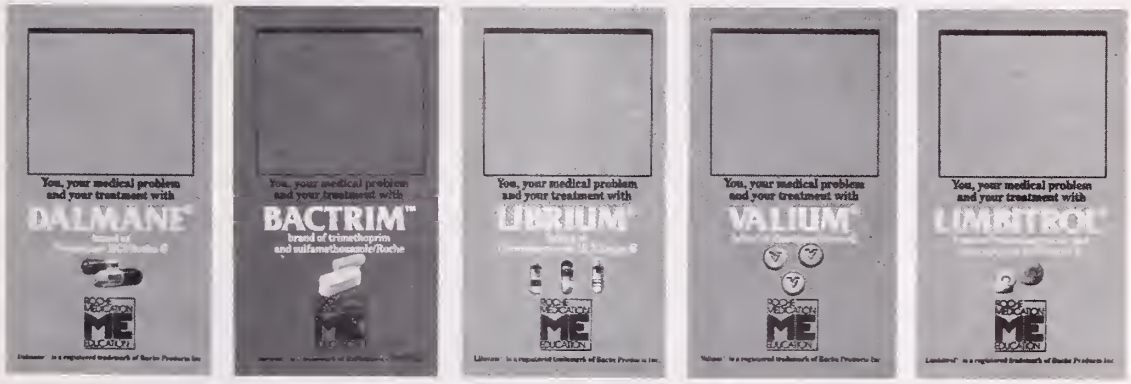

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In Locally Recurrent Carcinoma of the Recto-Sigmoid

Radiation Therapy With/Without Simultaneous Weekly 5 F.U.

PURENDRA P. SINHA, M.D.
Associate Professor, Department of Radiation Oncology, West Virginia University Health Sciences Center, Morgantown

Forty-eight patients received radiation therapy to the pelvis for locally recurrent carcinoma of the recto-sigmoid. The average duration before the development of local recurrence in the pelvis after curative surgery was 18 months. Thirty-seven patients had undergone a previous abdomino-perineal resection. Twenty-five patients had Dukes' Stage-C carcinoma. Twenty-one patients had Stage-B and only two patients had Stage-A carcinoma of the recto-sigmoid according to the Dukes' classification.

All patients received radiation therapy to the pelvis to an average total dose of 5,000 rads in 25 to 28 fractions over a period of five to five and one half weeks. Twenty-three patients also received simultaneous weekly 5 F.U. by a single I.V. bolus of 1000mg to potentiate the action of radiation therapy.

The treatments were well tolerated. The major complication was diarrhea, which responded satisfactorily to antidiarrheals such as Lomotil or Immodium tablets. Eighty per cent of the patients had pain relief.

The median survival was 18 months for the patients receiving radiation therapy alone, but the patients treated with both radiation therapy and 5 F.U. had an average survival of 21 months and better palliation of symptoms.

Introduction

Carcinoma of the recto-sigmoid is the fourth leading cause of death in the United States. The traditional main treatment of the localized disease is curative surgery which yields an average five-year survival of approximately 50 to 55 per cent. In spite of radical surgery, local recurrence in the pelvis remains a very troublesome and challenging problem. Such recurrences are due to the implantation of malignant tumor cells at the time of resection, microscopic residual disease in the pelvic soft tissues, lymphatics or in the lymph nodes.

Several authors (7, 8, 13, 20, 24) have found that 45 to 60 per cent of the patients with recurrent disease die of the local failure in the pelvis only. Although surgery plays the major role in the management of the primary recto-sigmoid carcinomas, it has very little to offer in the case of recurrent disease other than a colostomy. Chemotherapy has been tried but has not proved to be effective.

Radiation therapy is the treatment of choice in this distressing disease. Although radiation therapy offers good palliation in 75 to 80 per cent of cases, the majority of patients die within two years either with local regional disease or with distant metastasis. Different authors have utilized different doses of radiation therapy. They all agree that a dose more than 5,000 rads to the pelvis results in severe complications such as intestinal nerosis and even death. Long-term survival in this dose range has remained less than 10 per cent.

Several studies have shown that concomitant use of 5 F.U. improves the effects of radiation therapy. The 5 F.U. acts by inhibiting thymidylate synthetase, essential in the formation of DNA and to a lesser extent in the formation of RNA, both essential for cell division and growth.

TABLE 1
Biopsy Reports According to Classification

Well-Differentiated Adenocarcinoma	10
Moderately Well-Differentiated Adenocarcinoma	16
Poorly-Differentiated Adenocarcinoma	18
Undifferentiated Adenocarcinoma	4
TOTAL PATIENTS	48

TABLE 2
Retrospective Staging of the Disease According to Astler-Coller Modification of Dukes' Classification—48 Patients

		NUMBER OF PATIENTS		
STAGE	*DESCRIPTION*	*RECTUM*	*SIGMOID*	*TOTAL*
Stage A	Lesion limited to mucosa	2	0	2
Stage B_1	Lesion extended through mucosa with negative nodes	5	3	8
Stage B_2	Lesion extended through entire thickness with negative nodes	9	4	13
Stage C_1	As stage B_1 but with positive nodes	7	1	8
Stage C_2	As stage B_2 but with positive nodes	9	8	17
TOTAL		32	16	48

Heidelburger (16), in 1958, found enhanced effects of radiation therapy in combination of 5 F.U. in implanted animal tumors. This was later confirmed by Vermund and his colleagues in 1961 (26). Several authors (4, 5, 19, 23) have demonstrated statistically significant advantages in local control of the disease and also in prolongation of survival for patients who received both radiation therapy and 5 F.U.

The primary goal of this study is to compare the value of a moderate dose of radiation to the pelvis alone and the same combined with simultaneous 5 F.U. to assess which method achieves maximum tumoricidal and minimum normal tissue effects.

Materials and Methods

From 1974 to 1983, over a period of 10 years, 48 patients with locally recurrent carcinoma of the recto-sigmoid were treated by radiation therapy to the pelvis in the Radiation Oncology Department of West Virginia University at Morgantown. Patients with evidence of distant metastasis including peritoneal seedings and patients receiving less than 5,000 rads to the pelvis have been excluded from this study. All patients had previous definitive surgical procedure, and none had received prior radiation therapy or chemotherapy. Thirty-two patients had undergone abdomino-perineal resection, thirteen had anterior resection, and three underwent hemicolectomy. The grades of tumors are given in Table 1. There were 28 males and 20 females. All patients were white with a mean age of 61 years.

Patients were staged retrospectively according to Astler-Coller modification of Dukes' classification (Table 2). Twenty-five patients had Stage C, 21 had Stage B, and two had Dukes' A disease. The mean period to develop local recurrence after definitive surgery was 15 months (Table 3). The most common symptom was pelvic and/or perineal pain with radiation to the lower back and thighs.

The patients were treated by Theratron-80, Cobalt-60 or 4 MeV Linear Accelerator x-ray machine to the pelvis by parallel opposing ports or by four-field pelvis box technique. All ports were treated daily, five days a week. The radiation volume extended from the upper edge of the sacrum to the lower most projection of the perineal skin and one cm beyond the pelvic outlines.

Twenty-five patients (Group A) received a dose of 5,000 rads in 25 to 28 fractions without any 5 F.U. Eight such patients also received an additional dose of 1,000 rads in five fractions to the tumor-bearing area as a booster dose. Twenty-three patients (Group B) received the same dose of 5,000 rads to the pelvis but along with 5 F.U., 1,000mg once a week on Wednesday within two hours of radiation therapy in a single intravenous bolus. None of the patients of Group B received any additional booster dose.

TABLE 3

Time Interval Between Definitive Surgery and Local Pelvic Recurrence in 48 Patients —According to Dukes' Classification

TIME INTERVAL	*DUKES' A*	*DUKES' B*	*DUKES' C*	*TOTAL*
0-6 Months	0	2	2	4
7-12 Months	1	6	7	14
13-18 Months	0	8	11	19
19-24 Months	0	2	3	5
25-30 Months	0	1	1	2
31-36 Months	1	1	1	3
Fourth Year	0	0	0	0
Fifth Year and After	0	1	0	1
TOTAL PATIENTS Median = 15 Months	2	21	25	48

TABLE 4
Symptoms and Response After Treatment in the Two Groups of Patients

SYMPTOM	*GROUP A (25 Patients) Treated with Pelvic Radiation Only*		*GROUP B (23 Patients) Treated with Pelvic Radiation and 5 F.U.*	
	Number of Patients with Symptoms before Treatment	*Complete Response*	*Number of Patients with Symptoms before Treatment*	*Complete Response*
1. Pelvic Pain	23	13 (55 Per cent)	21	18 (87 Per cent)
2. Rectal Discharge	4	3	3	3
3. Rectal Bleeding	3	2	3	3
4. Perineal Nodules	3	2	3	3
5. Vaginal Discharge	2	1	1	1
6. Diarrhea	2	2	1	1
7. Dysuria	2	1	2	1

Results

Symptoms of pelvic recurrences and a comparison of palliation of symptoms of the two groups are demonstrated in Table 4. Eighteen of 21 patients (86 per cent) receiving both pelvic radiation therapy and 5 F.U. had complete pain relief while 13 of 23 patients (55 per cent) treated with pelvic radiation therapy without any 5 F.U. had pain relief. All six patients with rectal bleeding and/or rectal discharge had complete palliation with the combined therapy.

The side effects seen during radiation therapy and after completion of treatment have been summarized in Table 5. The most troublesome complication during treatment was diarrhea, seen more in patients receiving both radiation therapy and 5 F.U. (10 of 23 patients of Group B VS seven of 25 patients of Group A), but this was controlled by a low-

residue diet, Lomotil or Immodium tablets and, occasionally, by giving rest from the radiation therapy for a few days and/or lowering the dose of 5 F.U. Patients with skin reactions were treated with Acid Mantle Cream with Hydrocortisone with satisfactory response. Evidence of bone marrow depression was seen more in Group B patients (three patients VS one patient), but blood counts came back to normal after two to three weeks. Only one patient had small bowel obstruction due to late effects of radiation therapy. This was one of eight patients receiving 6,000 rads to the pelvis without any 5 F.U. Intestinal adhesion was seen in two patients, one in each group. No patient suffered from subcutaneous fibrosis, pelvic abscess or fistula.

Table 6 summarizes the cumulative survival in both groups of patients. From this table it is obvious that the patients receiving radiation therapy with 5 F.U. survived longer (21 months against 18 months). Six of 23 patients (26 per cent) with combined therapy survived for three years, and two patients (nine per cent) lived for five years. On the other hand, the three-year survival in Group A patients was 16 per cent (four of 25), and only one patient lived for five years (four per cent).

The incidence of development of distant metastasis after the completion of treatment was 25 of 48 patients (56 per cent). The most common sites were liver, bones and brain. Such metastasis usually developed within 16 months of treatment.

TABLE 5

Side Effects During and After Treatment

REACTIONS	*GROUP A (25 Patients) Radiation to Pelvis without 5 F.U.*	*GROUP B (23 Patients) Radiation to Pelvis with 5 F.U.*
ACUTE EFFECTS		
1. Skin Reaction (Moist Desquamation	1	2
2. Diarrhea	7	10
3. Vomiting	2	3
4. Leukopenea (Less than 2,000c.mm)	1	3
5. Thrombocytopenea (Less than 100,000c.mm)	1	3
LATE EFFECTS		
1. Subcutaneous Fibrosis	1	1
2. Intestinal Adhesions	1	1
3. Intestinal Obstruction	1	0

TABLE 6

Cumulative Survival in Both Groups of Patients

MONTHS AFTER TREATMENT	*GROUP A (25 Patients) Pelvic Radiotherapy Only (Average Survival—18 Months)*	*GROUP B (23 Patients) Pelvic Radiotherapy with weekly 5 F.U. (Average Survival—21 Months)*
12 Months	12/25 (48 Per cent)	16/23 (70 Per cent)
24 Months	8/25 (32 Per cent)	9/23 (39 Per cent)
36 Months	4/25 (16 Per cent)	5/23 (22 Per cent)
48 Months	1/25 (4 Per cent)	2/23 (9 Per cent)
60 Months	1/25 (4 Per cent)	2/23 (9 Per cent)

Discussion

In the United States, 16,000 patients die every year of carcinoma of the recto-sigmoid. About 50 per cent of such deaths are due to active disease in the pelvis, and the rest due to distant metastasis. The average duration of development of pelvic recurrences after the initial curative surgery is 12 to 15 months (7, 13, 20, 24, 28). Hindo (18) reported an average of 26 months for the patients with Dukes' B and 14 months for Stage C disease to develop pelvic recurrences. He also reported that eight per cent of his 67 patients developed recurrence more than five years after initial surgery, and none had Dukes' A disease. In this series two of 48 had Dukes' A disease, and only one developed pelvic recurrence five years after surgery.

Surgery plays almost no role in the treatment of locally recurrent recto-sigmoid carcinomas except for a diverting colostomy.Chemotherapy alone has been very disappointing. Welch and Donaldson (30), who treated 32 patients with systemic 5 F.U., reported an average survival of six months, with only three per cent (one of 32) surviving for two years. Greco et al. (10) reported the use of a combination of Methyl CCNU and 5 F.U. with or without Vincristine in 19 patients with advanced rectal carcinomas, but none had regression of the measurable disease, and median survival was only 23 weeks. Hafstrom (15) reported an average survival of nine months and 50-per cent tumor response in 10 patients treated by continuous intra-arterial 5 F.U. infusion. Pain relief lasted only four months, and five of 10 patients (50 per cent) developed thrombosis, septicemia, thrombocytopenia and anuria.

Radiation therapy has been used extensively in patients with pelvic recurrences for several decades (2, 11, 18, 22, 25, 29, 31). Different radiation doses and treatment techniques have been tried. Whitley (31) treated his patients with modest doses of 2,000 to 2,500 rads in 10 fractions to the pelvis and found that such low doses were very disappointing. Repeated application of radiotherapy usually was necessary. Hindo (18) demonstrated that a dose of at least 4,500 rads to 5,000 rads was necessary for effective control of the symptoms. He found no response in 52 per cent

of 51 patients when a N.S.D. of 1,001 to 1,300 R.E.T. was used, but 13 of 15 (87 per cent) had satisfactory response when the dose was increased to 1,500 R.E.T.

Wang and Schulz (29) reported only 50-per cent palliation of pain in 36 patients who received a dose of 2,000 rads to 3,000 rads to the pelvis. The pain relief in these patients lasted for only six months. However, 12 of 14 (86 per cent) had pain relief seven months to 10 months when a dose of 5,000 rads and over was given, and six of 58 (11 per cent) survived for five years. Urdaneta-Laffee (25) treated 42 patients with 3,000 rads to the pelvis and had a survival of 13 per cent for two years but none of his patients lived for four years. Rao (22) found compete relief of symptoms in 60 per cent of his patients when a pelvic dose of 4,500 rads to 5,000 rads was employed.

In order to improve radiosensitivity, hyperbaric oxygen has been used in England by Dische (6), who treated 16 patients with locally recurrent recto-sigmoid carcinomas with 3,900 rads to 4,900 rads to the pelvis along with hyperbaric oxygen and achieved palliation in 50 per cent for 12 to 14 months.

There have been several studies (3, 4, 5, 17, 19, 23, 27) employing 5 F.U. as a radio-sensitizer in recto-sigmoid carcinomas. Moertel (19), in a randomized study, reported an increase in survival from 10 months to 16 months when 5 F.U. was added to the pelvic radiation therapy of 4,000 rads in four weeks. Arnott (1) had a similar experience, and reported an average survival of nine months but the total dose of 3,000 rads to 3,500 rads to the pelvis in his patients was low. Vongtama (27) reported an average survival of 24 months and five-year survival of 9.6 per cent in 55 patients treated with 5,000 rads to the pelvis by split-course technique and 5 F.U.

Higher doses of radiation therapy in the range of 6,000 rads or more to the pelvis with or without 5 F.U., in the hope to obtain maximum benefits, usually resulted in many more complications (4, 5, 9, 21). An R.T.O.G. study (23) evaluated the effectiveness of a tumor dose of 6,000 rads in seven weeks with or without 5 F.U. and maintenance chemotherapy with methyl CCNU and 5 F.U. The median survival in both groups was 18.5 months, and the two-year survival was 44 per cent in 64 patients. However, in 14 patients severe complications developed including severe diarrhea, leukopenea, hematuria, and rectal bleeding. Ten of 64 patients (15 per cent) had life-threatening bowel complications such as necrosis, abscess and stricture. Danjoux (5) treated 16 patients with 6,000 rads to the pelvis either by continuous or split course with 5 F.U. and observed an average survival of only 16 months, but most of his patients had severe diarrhea, leukopenea and skin reactions.

"Complications such as diarrhea, leukopenea and thrombocytopenea were 10 to 15 per cent more in patients receiving both radiation therapy and 5 F.U., but such side effects were manageable . . ."

Gunderson (14) treated five patients with recurrent rectal carcinoma with 5,000 rads to the pelvis with external photon therapy and with a further dose of 1,500 rads by using intraoperative electrons, but three of his five patients failed this treatment, and residual disease at the resection margin was found in all the patients. Gunderson (12) also recommended delivery of 6,000 rads to 7,000 rads after pelvic reconstruction such as reperitonealization, omental flaps, or retroversion of the uterus, etc., to remove small intestines completely out of radiation fields; however, no definite data on the local control, palliation of symptoms, survival, operative and radiation therapy complications are mentioned in his report.

This study compares the results of modest doses of radiation therapy to the pelvis with or without the simplest method of using simultaneous 5 F.U. It is observed that the combined treatment had better palliation of symptoms and prognosis. Complications such as diarrhea, leukopenea and thrombocytopenea were 10 to 15 per cent more in patients receiving both radiation therapy and 5 F.U., but such side effects were manageable with antidiarrheals, discontinuation of radiation therapy for a few days, and lowering the dose of 5 F.U. Higher dose of 6,000 rads to the pelvis without 5 F.U. resulted in intestinal obstruction and perforation in one of eight such patients (13 per cent).

Acknowledgement

The author wishes to thank Mrs. Kim Raines and Mrs. Betty Garlow of the Tumor Registry of the West Virginia University Medical Center for supplying the data, and Mrs. Lisa Lancaster for her help in typing this manuscript.

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Prevalence and Risk

Diabetic Retinopathy in a Rural Diabetic Population

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As part of the West Virginia Diabetes Eye Care Project of 1986, 178 patients in a rural diabetic population were screened for diabetic retinopathy using psychophysical testing and stereo fundus photography. The effects of sex, age, mode of therapy, and duration of diabetes mellitus on the prevalence of retinopathy were investigated.

The prevalence of retinopathy was 34 per cent among insulin-treated patients, 18 per cent for those receiving oral hypoglycemics, and seven per cent for the diet-controlled group. Diabetic retinopathy was most prevalent among insulin-dependent patients with prolonged duration of disease. Age did not affect the prevalence of retinopathy after adjustment for sex and duration of diabetes.

Diabetes mellitus comprises a spectrum of hyperglycemic disorders with different genetic bases, precipitating factors, and response to various modes of treatment (1). Diabetic retinopathy remains one of the leading causes of blindness in the United States (2). Each type of diabetes may have a different prevalence of retinopathy. Increased prevalence of retinopathy with advanced duration of insulin-dependent diabetes (IDDM) and age has been established (3). However, the association between noninsulin-dependent diabetes (NIDDM) and the prevalence of retinopathy has not been well documented. In this study the authors evaluate the prevalence of diabetic retinopathy in a population of diabetic patients treated by insulin injection, oral medication and dietary control.

Patients and Methods

As part of the West Virginia Diabetes Eye Care Project of 1986, diabetic patients were screened for retinopathy using visual acuity, color vision testing, contrast sensitivity, and fundus photography. Patients with diabetes mellitus were invited to a screening at 10 separate rural outreach clinics throughout West Virginia (Figure 1). A total of 178 insulin-dependent, oral hypoglycemic, and diet-controlled diabetics were screened. The age at onset of diabetes and the specific method and amount of therapy were recorded for all patients. All systemic or ocular illnesses the patients were being treated for and any medications being taken were also recorded. Of the 178 diabetics screened, 58 were on insulin-injection therapy, 90 were on oral hypoglycemics, and 30 were on dietary treatment alone.

The presence of retinopathy was determined by interpretation of fundus photographs based on the standard grading outlined by the Diabetic Retinopathy Study Research Group (4). The presence of diabetic retinopathy was defined as retinal microaneurysms, hemorrhages, exudates, or neovascularization. Evidence of even one of these lesions in the fundus was sufficient for the diagnosis of diabetic retinopathy.

The effect of sex, age, mode of therapy, and duration of diabetes on the prevalence of retinopathy was studied. The oral hypoglycemic and diet-controlled groups were combined for the NIDDM group because the number of persons with retinopathy in the diet-controlled group was too small to allow meaningful statistical analysis.

Figure 1. Outreach clinic screening sites for West Virginia Diabetes Eye Care Project.

Results

The prevalence of diabetic retinopathy among diabetics screened was highest in the insulin-treated group (34 per cent), 18 per cent among those on oral medications, and seven per cent among those in the diet-controlled group. The effect of sex, age, mode of therapy, and duration of diabetes on the prevalence of retinopathy among IDDM and NIDDM (oral medication and diet-controlled) patients is summarized in Figure 2. Diabetic retinopathy was more prevalent among IDDM patients with duration of disease >10 years compared to NIDDM patients with duration of disease >10 years and all persons with diabetes for ≤10 years' duration. This higher prevalence of retinopathy was observed for both males and females having IDDM of >10 years' duration. Equal prevalence of retinopathy between IDDM and NIDDM patients was observed for males >60 years of age having diabetes for ≤10 years. NIDDM males ≤60 years of age having diabetes for ≤10 years had a higher prevalence of retinopathy than the IDDM patients in that stratum. Males >60 had a higher prevalence than females >60 for both IDDM and NIDDM groups after adjustment for age and duration of disease. Seventy-two per cent of all patients with retinopathy had a visual acuity ≥20/50.

Tabulated pathology observed on fundus photographs of all diabetics showed an increased cup-to-disc ratio for nine patients, retinal pigment epithelium changes for four patients, asteroid hyalosis for two patients, and ocular histoplasmosis syndrome for one patient. The results of psychophysical testing are not reported in this article (5).

Discussion

Our findings confirm many of the findings of other studies. The association of IDDM and duration of diabetes >10 years with a higher prevalence of diabetic retinopathy has also been reported by Klein et al. (7) and Dwyer et al. (17). Many reports have confirmed the use of insulin and prolonged duration of diabetes as significant independent risk factors for the development of retinopathy (6-11, 13-17, 19, 20).

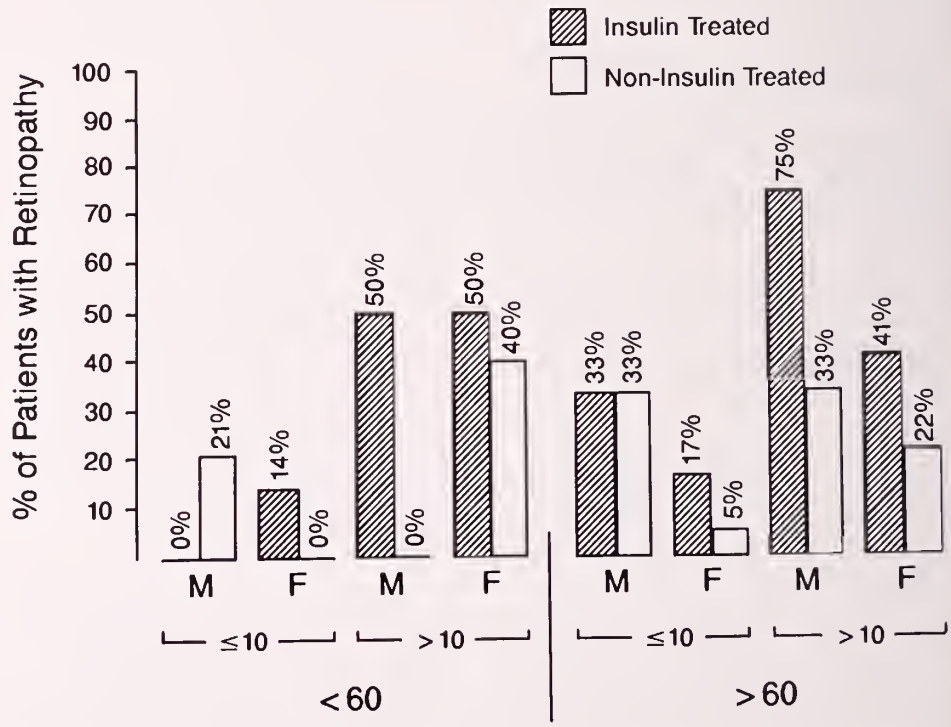

Figure 2. Patients with diabetic retinopathy stratified by mode of therapy (IDDM vs NIDDM), sex (M = Males, F = Females), age (<60 or ≥60 years of age), and duration of diabetes (≤10 years or > 10 years' duration). The height of the bars represents the percentages of patients with retinopathy in each group.

An increasing prevalence of retinopathy as the severity of disease advances has been observed in other studies (8, 11, 19, 20). Our 21.3 per cent was similar to the 19.9 per cent found in a rural diabetic population by Kollarits, et al. but less than other reports (6-9, 19, 20). We found males >60 years old to have a higher prevalence than females >60 for both IDDM and NIDDM groups. Only Klein et al. (13), who studied nonproliferative diabetic retinopathy, reported a higher prevalence of lesions among males for both older- and younger-onset diabetics.

A review of the literature indicates that high levels of glycosylated hemoglobin, presence of proteinuria, higher diastolic blood pressure, and high serum creatinine are associated with the presence and severity of diabetic retinopathy (6-16, 19). Both marked obesity and small body mass have been shown to be related to the presence and severity of retinopathy (7, 8, 15, 17).

The ability of primary care physicians to evaluate diabetic retinopathy has been disappointing (21). Although our findings suggest the duration of diabetes and the method of glucose control as possible causative factors for the presence of retinopathy, we cannot determine the predictive value of these factors based on this cross-sectional study. However, an awareness of such risk factors helps primary care physicians to identify diabetics who require a baseline or periodic dilated fundus examination.

Our study confirms that diabetic retinopathy is a significant problem among those diagnosed with diabetes in rural areas in West Virginia. Since laser treatment is successful in reducing loss of vision from macular edema and proliferative diabetic retinopathy, timely and appropriate referrals to ophthalmologists will help reduce loss of vision from diabetic retinopathy.

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Of the Nasal Septum

Metastatic Renal Cell Carcinoma

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Renal cell carcinoma tends to metastasize early to nearly all organs. In the head and neck region, the nasal cavities and paranasal sinuses are targets for its hematogenous spread. This is a case report of a renal cell carcinoma involving the nasal septum that presented as severe epistaxis after a nephrectomy for its primary and after a finger amputation for its metastatic site.

Renal cell carcinoma comprises 85 per cent of all primary malignant renal tumors (1). Its incidence is 7.5 per 100,000 of the general population, and occurs at 60 years average age with male predominance (2:1). An abdominal mass, flank pain, and hematuria are its classical triad, although this is manifestated only in 10-15 per cent of cases. When diagnosed, nearly a third of the patients with renal cell carcinoma already have metastasis (2) to the lungs, brain, bones or other organs.

The incidence of metastasis of renal cell carcinoma to the head and neck area is 15 per cent with

predilection to the nasal cavities and paranasal sinuses (3). Its metastasis may precede discovery of the primary or present after treatment of a known primary or other metastatic site. This is a case report of a metastatic renal cell carcinoma of the nasal septum that appeared after a nephrectomy of the primary three months before, and amputation of a metastatic left middle finger three months prior to the nephrectomy.

Case Report

A 79-year-old, white man was examined at the Eye and Ear Clinic of Charleston, West Virginia, for epistaxis of two weeks from the right nasal cavity. He had no history of hypertension, infection or trauma. Six months before, he had amputation of the left middle finger for metastasis, followed by a left nephrectomy for renal cell carcinoma three months later. Examination showed a 1.5-cm reddish mass resembling a pyogenic granuloma at the caudal surface of the right nasal septum. An excisional biopsy of the mass with local anesthesia was done in the office. Due to severe bleeding after the biopsy, the patient was admitted to the hospital for control of bleeding and observation. During this admission, the patient developed a left-sided body weakness with lethargy and incoherence. Neurological examination and CT scanning disclosed right cerebral hemisphere metastasis that was treated with intravenous steroids, progesterone and 3,000 rads of cobalt radiation with excellent outcome. The initial histological diagnosis of the septal mass was paraganglioma, but review of the nephrectomy and amputation slides revealed identical pictures of renal cell carcinoma (Figure 1).

As the patient's brain metastasis resolved, the septal mass had grown to a 3-cm exophytic tumor completely filling and flaring the right nasal vestibule (Figure 2). Tomogram of the nasal cavities and sinuses displayed tumor involvement of the cartilaginous septum only. Chest x-ray showed a nodule of the left lower lobe that was presumed to be metastatic. Through a lateral rhinotomy, the cartilaginous septum with portion of the nasal vestibule

Figure 1. Photomicrograph of metastatic renal cell carcinoma of the nasal septum.

Figure 2. Metastatic renal cell carcinoma of the nasal septum.

and the tumor (Figure 3) were resected using the CO_2 laser with minimal bleeding. Healing was completed in three weeks and the patient was free of tumor for three years (Figure 4). He died of massive cerebrovascular accident and renal failure.

Discussion

Grawitz, in 1883, speculated that renal cell carcinoma arises from the adrenal crest, hence the term hypernephroma (Grawitz tumor) to describe the adenocarcinoma of the kidney. Subsequent investigators, however, showed that the renal adenocarcinoma originates from the proximal tubular epithelium (4). Histology of the tumor shows encapsulating connective tissue, clear

Figure 3. Resected specimen of metastatic renal cell carcinoma of nasal septum.

Figure 4. Postoperative appearance with CO_2 laser resection.

border of cells with round or oval nuclei, and empty (clear) cytoplasm (5). Initially, the tumor growth is slow, well-demarcated and benign. Later, the tumor becomes necrotic, hemorrhagic, and infiltrates adjacent tissue. When the renal pelvis and vein are involved, tumor emboli are formed, and multiple metastases are formed via the inferior vena cava. Lymphatic spread to regional nodes is frequent.

Metastatic lesions to the nasal cavities and paranasal sinuses are rare except in renal cell carcinoma (6). Absence of distinctive clinical features makes early diagnosis of renal cell carcinoma difficult (7). Presenting symptoms such as epistaxis, pain, nasal obstruction, and facial asymmetry are similar to primary lesions arising in these sites. Epistaxis is the leading symptom in 70 per cent of cases (8). Because the renal cell carcinoma is highly vascular, profuse bleeding often

results after biopsy. Thus, severe hemorrhage after biopsy of a necrotic nasal lesion should support the possibility of a metastatic renal cell carcinoma. Its histological vascular pattern can simulate other highly vascular tumors, e.g., Wegener's granulomatosis, midline granuloma, angiomas, paraganglioma, etc.

According to Nahum and Bailey (9), the mode of renal cell carcinoma metastasis to the nasal cavities and paranasal sinuses is Batson's vertebral venous plexus that has vast anastomoses with pelvic, intercostal and azygous veins including the inferior vena cava. Increased intraabdominal or intrathoracic pressure propels blood flow to the vertebral venous plexus, enabling renal cell carcinoma emboli to reach the venous lakes of the skull and consequently invade the nasal cavities and paranasal sinuses by retrograde routing (10).

Due to the protean metastatic propensity of renal cell carcinoma, its overall treatment is difficult and its prognosis poor (11). Chemotherapy is not effective. Surgery and radiotherapy of its primary and isolated metastatic sites (12, 13) have provided long-term survival of two to five years. CO_2 laser surgery for metastatic renal cell carcinoma of the nasal septum reduces bleeding, facilitates resection, and induces healing. The majority of patients usually die after two years of palliative treatment because of overwhelming metastases to vital organs.

Acknowledgements

The authors wish to thank Mary Jane Willis, PA, for preparing the manuscript, and Vincent J. Hyams, M.D., Capt MC, USN, for his suggestions.

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Part 1. Spiders

Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Bites and Stings

Discussant:
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Most animals can bite or sting. In narrowing the kingdom down to those that harm humans, the field still is vast. It would be interesting to explore the rich variety of pathology produced in us by moray eels, lionfish, sea urchins, jellyfish, sting rays, fire ants, kissing bugs, flies, lice, mosquitoes, ticks, mites, fleas, puss caterpillars, centipedes, snakes, dogs and cats, camels, and myriad other creatures including homo sapiens (not a trivial biter)—but for this grand rounds, the topic will simply be spiders (Part 1), bees and vespid (Part 2). Vespids are the wasps, yellow jackets and hornets.

Being a medical doctor makes one fair game for queries from patients, friends and relatives about the bites and stings of these ubiquitous venomous animals. Almost all of us are ourselves insulted by them on more than one occasion. When one is faced with questions about management, the matter becomes less philosophical and more pressing when it's oneself or one's family member who is asking the questions out of immediate personal concern. There are more questions than answers, but we do know a lot about these bites and stings and the care thereof. Three brief cases will introduce each area of discussion.

The first patient, age 55, was seen in an emergency department for terrible abdominal pain. He had developed diffuse pain, vomiting and prostration over a span of several hours. He was diaphoretic, febrile, tachycardic, and had a classically rigid, board-like abdomen. A surgeon was consulted. The surgeon was hesitant to proceed with a laparotomy because:

1. The time course seemed unusually abrupt for the onset of this apparent frank peritonitis;
2. Although the rigidity was definite, the tenderness wasn't equally impressive;

"The venom has several ingredients but clinically is mainly a neurotoxin"

3. The patient was restless and moving instead of displaying the avoidance of movement that is usually seen with peritonitis.

The patient was asked if he had a "privy" at home. Yes, he did. Had he used it today? Yes. Had he felt something stick him at the time? Yes, come to think of it. Further examination revealed a tiny reddened area on the scrotum. The correct clinical diagnosis of widow spider bite was made and the patient was given a muscle relaxant. The relief of pain was considerable. In a few hours the pain subsided and the patient required no further treatment.

This is a classic case of widow spider bite. Bites often happen in outhouses and are incurred on the buttocks or male genitals, and the presentation often mimics an acute abdomen when the bite is on the lower part of the body. It has been said that the morbidity and mortality of widow spider bites have declined with the advent of indoor plumbing.

Spiders

There are about 100,000 species of the class Arachnida worldwide, about 20,000 of them venomous. They densely populate the planet. The suburbanite's yard is thick with them, so thick that when the proud homeowner surveys his property, he is looking over, and usually overlooking, hundreds of thousands of spiders. Spiders generally live solitary lives. They are strict carnivores of living (or moving) prey. They also are cannibals. Females eat males, babies eat babies. Their webs are remarkable not only for design but for strength; the dragline of a spider's web is equal in strength to fine tensile steel of the same diameter. Babies hatched from egg sacs ride web tendrils to new homes, and have been found cruising at a five-mile altitude and many miles out to sea. Of North American groups, only two are dangerously venomous: the widow and the brown spiders. Spiders bite, not sting. Poison sacs surrounded by striated muscles are located in the cephalothorax near the jaw.

Widow Spiders (Iatrodactus)

The best known of the widow spiders is latrodactus mactans, the black widow. Of the five species, however, only three are black. One is known as the red-legged spider (southern), and one is brown. Latrodactus species live on most of the United States and Canadian land mass. This spider has a distinctive appearance, being large and shiny. Adult females have a leg span of four to five cm, with a body of one to one and one half cm. They have the classic red hourglass, or two triangles arranged point to point, on the ventral abdomen. Immature youths may have red markings on the back during the series of moltings that occur and transform red babies into darker adults.

Many are tiny, and their much smaller jaws and venom sacs do not pose a significant threat to humans. Contrary to popular belief, males survive in fairly close proximity to females. After copulation, the female is said to be lassitudinous and the male usually can avoid being devoured. The web of the widow spider is messy, irregular and often large.

"There is no known first aid for brown spider bites."

Habitat: They like cracks and crevices close to the ground. The widow is primarily an outdoor spider and is not often encountered in the house. They like outhouses, utility service holes, stone walls, trash piles, barns and stables. That which draws flies will draw spiders in turn.

Venom: In a female about 0.2 mg of venom is stored in two sacs near the jaws. A variable quantity may be injected with a given bite. The venom has several ingredients but clinically is mainly a neurotoxin. It induces nerve membrane and terminal leakage of acetylcholine and norepinephrine. The manifestations of envenomation are a picture of a mixed adrenergic and cholinergic overstimulation. Effects are both central and peripheral.

Clinical Course: Most bites are perceived (although not necessarily recognized) and are followed in 15 minutes to two hours by the onset of a dull, cramping band of pain at the bite site. This gradually spreads to cover a large area of the body. The pain tends to come in waves, and patients often are restless and toss around. The pain may have a burning quality. Bites on the lower half of the body often produce severe abdominal pain, whereas bites high on the body may mimic myocardial infarction or dissecting thoracic aortic aneurysm by causing severe chest pain. The patient experiences dizziness, anxiety, crampy myalgias and sometimes dyspnea.

The cholinergic effects of the venom may produce salivation, lacrimation, vomiting and diarrhea and bronchorrhea. Profuse sweating occurs. The release of norepinephrine from nerve terminals causes tachycardia. Blood pressure may be markedly elevated and may require treatment. Some fever is common. Reflexes are brisk.

The pain subsides after several hours, recurring less intensely at intervals over two or three days. There is not much tissue damage at the site of the bite, and the appearance of the bite is indistinguishable from a flea bite. The mortality rate has been said to be five per cent. Healthy adults are at small risk of death.

Diagnosis: The history and the clinical picture are the only means of diagnosis. There is no laboratory diagnosis. The apparent acute abdomen with too many other features and not enough real tenderness is one typical presentation.

Treatment: One author recommends ice to the bite site. Bring in the spider. Work up the possible causes of the abdomen or chest pain, if present. Provide supplemental oxygen. Protect the patient with an IV line and cardiac monitor. Treat extreme elevations of blood pressure. Muscle relaxants (benzodiazepines or others) are helpful for pain relief. One study compared calcium gluconate one gm IV with methocarbamol and found that pain was improved in six of 13 calcium-treated patients as opposed to one of 10 methocarbamol-treated patients. Dantrolene sodium also has been reported effective for muscle

relaxation in one uncontrolled study. Steroids have been recommended but there is no scientific evidence that they are of benefit. For the very young, elderly, frail or pregnant victim, antivenin is indicated, usually a single vial. It produces relief of the muscle pain within one hour. This is horse serum with the usual risks therof, and it requires a test done for allergy before administration. Finally, the bite site should be cleansed and tetanus immunization given if indicated.

Brown Spiders (loxosceles)

There are 13 species in the United States, with the brown recluse spider (loxosceles reclusa) the most prevalent. They sometimes are called violin or fiddleback spiders because of a dark marking that has that shape. This marking is on the dorsal surface and is not always easy to see. The color of the spider is fawn to dark brown, and it is a large spider, about equivalent in size to the widow. It does not have the gloss of the widow. Its distal body has an elongated oval shape. A relative newcomer to medical attention, the brown spider's first reported envenomation in the United States was in 1957. It seems to have expanded its early range in the south central states to as far north as Maine.

Habitat: Unlike the widow spider, the brown is not averse to living indoors. It is found in boxes, behind pictures, in clothing, and outside under stones or bark and in fields.

Venom: Instead of a neurotoxic venom like the widow spider's, the brown's venom is chiefly cytotoxic. It includes several enzymes and a postulated vasoconstrictor. The enzymes in the venom attack cell walls. Locally, the attack is severe and, systemically, it is significant. At the bite site there is local thrombosis, ischemia, necrosis and an intense leukocyte infiltration. Within hours, various organs including the heart also are invaded by white blood cells. One of the venom en zymes, sphihgomyelinase red blood cell membranes and can cause hemolysis. There is activation of complement, and this process has been thought by some to play a prominent role in the systemic toxicity of the bite. There also is activation of the coagulation factor cascade, with consumption of fibrinogen and platelets.

Clinical course: The brown's bite often goes unnoticed, and may occur during sleep as a person rolls over onto the spider. In two to eight hours there is onset of local pain, itching and tenderness. Erythema develops at the bite site, and the center usually develops a bleb or several vesicles. The central area's base becomes violaceous with the onset of progressive ischemia. Throughout the course of the insult at the bite site, there is a bull's eye appearance to the lesion. Over several days the central region necroses and the depth of the necrotic area progresses down into the subcutaneous fat in a gravity pattern. There is risk of gangrene. The center sloughs, sinks, and an eschar forms. Healing is by scarring, over a period of three to eight weeks.

"Throughout the course of the insult at the [brown's] bite site, there is a bull's eye appearance to the lesion."

Systemically, there are multiple effects. There may be a generalized fine macular rash. There usually is malaise, and in one series 41 per cent of patients mentioned headache among their complaints. Weakness, fever, chills, nausea and vomiting are common. The migration of white cells into tissue produces a transient leukopenia. Hypocomplementemia and thrombocytopenia are common. There may be generalized petechiae. Progressive red cell hemolysis can begin insidiously on the second or third day. Severe envenomation may cause shock, pulmonary edema, hemorrhage, renal failure and jaundice. The most common cause of death is said to be massive hemolysis. Leukocyte invasion of myocardium may cause dysrhythmias.

Treatment: There is no known first aid for brown spider bites. Bring in the spider, if found. Elevate and immobilize the affected extremity. Give oxygen, monitor the patient, and maintain an IV line. Laboratory studies should include blood type and hold, coagulation studies, CBC and platelet count, electrolytes, BUN and creatinine and urinalysis. Most of the blood tests should be repeated frequently, as the patient's condition indicates. Complement levels may aid the diagnostic effort. There is no commercial antivenin. An experimental antivenin was developed at Vanderbilt University, but was not shown to be helpful in the one published study of its use. Dapsone has been given to humans, and nitrogen mustard to animals, with variable results in inhibiting the effects of the toxin. Heparin and steroids also have been tried. None of these agents is widely accepted treatment for brown spider bites at this time. Early excision of the bite site has been practiced and advocated by one author, but there is no scientific evidence that it is helpful, and most often it is not done. Local wound care and debridement as necessary is the usual surgical approach.

A fundamental problem with attempts at either medical or surgical interruption of this toxic process is that patients usually do not seek care until many hours after the bite. By that time the pathologic effects have already been set in motion to an extent that largely precludes prevention of the consequences.

Next Month: Part 2. Bees and Vespids.

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UNIVERSITY OF VIRGINIA
HOSPITAL

President's Page

"We already have categories similar to the RCT in place now as the nursing assistant, the licensed practical nurse and the associate degree nurse."

Some Hospitals Are Working To Solve Their Nursing Shortage

At the Interim Meeting of the AMA in Atlanta in December, 1987, the House of Delegates passed a resolution for the Board of Trustees of the AMA to develop a possible solution to the nursing shortage in the United States. The Board followed the directions of the House and, in February of 1988, developed the concept of a new category of health care providers called "Registered Care Technician" (RCT). This report was presented to the House of Delegates at the AMA Annual Meeting in June, 1988, and after a voluminous and time-consuming debate the House accepted the report and gave the Board of Trustees authority to set up two pilot training programs. That is the status of the project at present.

The program would have three categories: the assistant tech, the intermediate tech, and the advanced tech. The amount of training for each of these levels is two months for the assistant, nine months for the intermediate and 18 months for the advanced tech. The selling point for the program is that recent high school graduates can take two months of training and start work as an assistant tech and progress with their training through the other two categories while they are working.

But wait! This is not addressing the needs of our West Virginia hospitals today. We need nurses now! Let's look at the problems that the RCT program faces. In order for the RCT option to become viable in West Virginia, the Legislature would have to enact legislation and designate a licensing board, training programs would have to be set up, and this could be done only after the AMA pilot programs have proven to be an effective alternative to our present nursing care.

We have a great nursing system in our state. We already have categories similar to the RCT in place now as the nursing assistant, the licensed practical nurse and the associate degree nurse. All three have similar times for training and levels of patient care. The feature lacking in our present system is the method and encouragement for educational advancement so that the nursing assistant can become a LPN, and the LPN can proceed to the ADN and even on to the bachelor nursing programs.

One of the best investments that a hospital can make is to develop and help finance the continued educational advancement of its present nursing employees. This is being done in many hospitals throughout the state. Camden Clark Hospital in Parkersburg has just completed a program whereby nursing assistants were allowed to take the LPN course at the hospital. All of the some 20 participants continued to work while taking courses, and they all passed the Practical Nursing Licensing Board Examination. Presently both Parkersburg hospitals, Camden Clark and St. Joseph's, are engaged in training programs for reentry into the nursing profession of licensed RNs who have not practiced for several years for various reasons, want to return to work, but want updated training in technology and pharmacology. Many of our hospitals are supporting educational advancement programs for their employees in the form of combined programs with nursing schools or colleges and tuition support.

I would like to commend all of our hospitals that have undertaken such efforts, and I encourage the continuation and spread of these efforts to other hospitals. I also encourage the physicians of our state to participate in the nursing training programs of our hospitals and to volunteer for local high school career day activities to help create a sincere interest in the great profession of nursing

—Bill M. Atkinson, M.D.

A Small Exercise in Logic

Any physician providing direct care to patients knows, without a shred of doubt, that the net effect of PRO activities and of compliance with HCFA or general HHS regulations is that he is able to provide less service to fewer people.

The people performing the PRO functions and those creating regulations are not really malicious ogres. Passing one on the street you might never know that person's true occupation. They are ordinary looking people and live otherwise humdrum lives. They believe that they provide an honest service to the medical profession and to those we serve.

They believe that their efforts and their services enable us to provide a purer and a higher brand of attention to our patients, and they believe they make it possible for us to do our work in a non-prejudiced, undiscriminatory manner. Like dedicated public servants, they work long hours to provide this help to us and our patients.

It has occurred to us that, perhaps, we all might benefit if somehow these helpers and regulators might be made the beneficiaries of similar aid and assistance. With proper review of their work and adherence to governmentally determined reasonable regulations, the quantity of their product, too, might be diminished. The logical result, it seems clear, is that we would be less encumbered and thus free to provide more service to more people.

It all seems so obvious! We need a PRO to review the work of our PROs and a well-defined set of regulations to control the regulation writers. There can be no question that this would, indeed, reduce the number of reviews and stem the proliferation of regulations. The well-intentioned but misguided efforts of our tormentors can thus be modulated, and we can once again turn our attention to taking care of patients instead of charts and forms and reports.

Instead of becoming irritable and chafing at ritualized form filling, PRO personnel and their regulation-writing colleagues can remind themselves of all the good and helpful things they have been telling us about the ultimate good of it all, about quality and efficiency, and how much money will be saved in the long run.

Think of the benefit of a requirement for a formal CON application and approval before beginning to write a new regulation! Environmental impact studies . . . public hearings . . . HMMM . . .

It is obvious that our current problem with bureaucracy is just that bureaucracy has not been carried far enough. One more step and we should have it right!

Certainly an idea worthy of consideration by alert, ambitious young legislators or others interested in harnessing votes and other good things in life . . . An opportunity to create an entirely new bureau of government staffed by new public servants all eager and grateful for the opportunity to be so happily and productively employed . . .

Yes, there are possibilities here.—SDW

Farmers as Nurses

A shortage of nurses. A surplus of farmers looking for other work.

Put the two together and you come up with one of the most novel ideas of our time—farmers going into nursing.

It sounds off the wall, but if you look a little closer, it's an idea that's time may have come.

The idea is the brainchild of Dr. Rosalee Yeaworth, Dean of the College of Nursing at the University of Nebraska Medical Center in Omaha.

"We all have stereotype images of people," Doctor Yeaworth said. "Most of us associate farmers with fields and tractors and tending to crops and livestock. It's difficult to picture them in cardiac catheterization labs, emergency rooms or operating rooms caring for people.

"But if you stop and think about it, many of the skills required of a farmer are the same skills involved in nursing. Farmers can be very nurturing of livestock. They have to know a lot about chemicals used in pesticides and herbicides and drugs used for livestock. The nurturing, chemistry and pharmacology of nursing is different, but it draws on some of the same knowledge and ability,"

To help struggling farmers make the transition to nursing, Doctor Yeaworth is looking into the possibility of securing grant money from private foundations and governmental nursing agencies.—*Guest Editorial by University of Nebraska Medical Center.*

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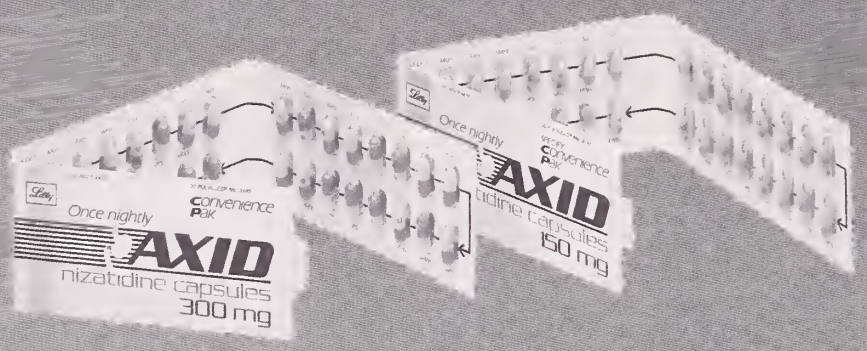

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AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 600 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

AMA Trustee

Miami Surgeon to Address Convention House Session

An AMA Trustee, Rufus K. Broadaway, M.D., of Miami, Florida, will address the first session of the House of Delegates at WVSMA's 122nd Annual Meeting. The House session will begin at 2:45 P.M. Wednesday, August 16; the convention is scheduled August 16-20 at the Greenbrier.

Doctor Broadaway, Senior Vice President of Medical Affairs at Cedars Medical Center in Miami, was reelected to the AMA Board of Trustees in June, 1988. He'll be speaking in the place of the current AMA President Elect, Alan R. Nelson, M.D., who will be out of the country at that time. Doctor Nelson will be installed as AMA President in June.

The 1989 Annual Meeting will follow the usual pattern including the opening House session Wednesday afternoon, a keynote address Thursday morning, scientific sessions Thursday, Friday and Saturday mornings, section and society meetings primarily on Friday, and the second House session Saturday afternoon. A presentation on computer diagnostics is being planned for Friday afternoon. Social and other convention activities will be announced.

Scientific discussion subjects will include Lyme disease, external influences on practice, the 'tight building' syndrome, gastritis and peptic ulcer disease, disease prevention, and magnetic resonance imaging (MRI).

JCAHO Board Chairman

Since 1984, Doctor Broadaway has been an AMA Commissioner to the Joint Commission on the Accreditation of Healthcare Organizations, and Chairman of the AMA Commissioners in 1987-88. He is current Chairman of the Board of the JCAHO.

Rufus K. Broadaway, M.D.

Doctor Broadaway was President of the AMA Education and Research Foundation from 1983 to 1986.

Until his election to the Board in 1982, Doctor Broadaway represented the Florida Medical Association as an Alternate Delegate (1969-71) and as a Delegate (1971-82) to the AMA House of Delegates. His AMA activities have included service as Chairman of the AMA Council on Long Range Planning and Development and as a member of the Special Committee of the House of Delegates that reviewed the Association's structure in 1975.

Born in Jackson, Mississippi, Doctor Broadaway received his M.D. degree from Harvard Medical School in 1950. He served his internship and residency at the Mary Imogene Bassett Hospital in Cooperstown, New York, and at Columbia Presbyterian Hospital, New York City.

Doctor Broadaway is a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons. His academic appointments include Clinical Professor of Surgery at the University of Miami School of Medicine.

Doctor Broadaway and his wife, Marion, live in Coral Gables.

Scientific Speakers

Speakers and topics for the Friday morning scientific session, as announced previously, will be: "Lyme Disease: The Latest Great Imitator," Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, West Virginia University Health Sciences Center, Morgantown; "External Influences on the Practice of Medicine," Robert W. Cantrell, M.D., Fitz-Hugh Professor and Chairman, Department of Otolaryngology-Head and Neck Surgery, University of Virginia; and "Allergy-Free, Non-Toxic Environment: The Effect of the Built Environment on Our Health," Robert J. Kobet, AIA, Butler, Pennsylvania.

Members of the 1989 Annual Meeting Program Committee are Drs. Michael J. Lewis, Morgantown, Chairman; James L. Bryant, Clarksburg; C. Richard Daniel, Beckley; Derrick L. Latos, Wheeling; Michael A. Morehead, Parkersburg; Maurice A. Mufson, Huntington, and Stephen L. Sebert, Lewisburg.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

April 8, Fourth Medicolegal Investigation of Death Seminar—Blood Stain Pattern Analysis

April 21, Ethical Issues in the Health Care of the Elderly

May 5-6, Medical Management of Respirator Use

CAMC/West Virginia University Charleston Division

April 21, 16th Annual Newborn Day

April 21, The Impaired Professional (workshop for physicians)

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—April 27, MRI in Primary Practice, David A. Sparks, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—April 6, Balloon Angioplasty of Coronary Vessels—Will it Replace Bypass Surgery?, Abnash Jain, M.D.

April 27, Carotid Endarterectomy, Howard Kaufman, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—April 13, Overview of Physical Therapy Modalites, Louise Christianson, P.T.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—April 19, Discussion on Depression—Diagnosis & Treatment, Van Nickell, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—April 4, Laser Use in Surgery in 1989, Abnash Jain, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—April 5, Hospital Risk Management, Joseph Skaggs, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—April 20, Neonatology Update, Dale Landes, M.D.

Logan, • General Hospital, 11:30 A.M.—April 28, Organ Transplantation, Ernest Hodge, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—April 11, Organ Donors & Transplans, Ernest E. Hodge, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—April 18, Current Advances in the Treatment of the Acute MI, Stephen Lewis, M.D.

Martinsburg, ★ V.A. Medical Center, 2 P.M.—April 6, Informing the Patient About Cardiopulmonary Resuscitation, Alvin H. Moss, M.D.

Montgomery, • General Hospital, 12 P.M.—April 5 (program tba)

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—April 6, Comprehensive Evaluation of the Older Patient, David Z. Morgan, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—April 13, Diagnosis & Management of the Hypothyroid Patient, Steven Grubb, M.D.

Parkersburg, ★ Camden-Clark Hospital 7 A.M.—April 12, Diabetes Mellitus in Children, Angel Vazquez, M.D.

April 26, Gastrointestinal Endoscopy—When it is Indicated, Ronald Gaskins, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—April 14, Physician-to-Physician Referral, Paul Ostasiewski.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—April 20 (program tba)

Spencer, • Roane General Hospital, 12:30 P.M.—April 18 (program tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—April 4, Constipation in the Elderly, Warren Point, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—April (no program)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—April 26, Advanced Cardiac Life Support: A Chalk Talk, Harold Selinger, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—April 18, Geriatric Medicine, Shawn Chillag, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—April 6, Pulmonary Embolism, Mahendra M. Patel, M.D.

Poetry Corner

Altogether Spring

Eons ago it seems, it came
But seemed more cold
And dark this time
Because summer not long dead
and Fall, its color gone
Leaves only hope for quick passage
till the rites of spring
Bring once again the rising of hope and
the sure knowledge of life renewed.

Heralded by the Robins bobbing search for food
And the smell of leaves burning
in a country garden
A budding leaf and a gentle rain
Serves notice that there lives still
In the rubble of a year long gone
The essence of life and love
A renewal? Nay
A continuum—
Dressed in green and
altogether lovely and desirable.

J. Paul Aliff, M.D.
Teays (Putnam County)

Fulfillment

To achieve a most fulfilled life
Knowledge and drive are required
To learn to adapt will be arduous
A regimen for success is laborious

Romeo Y. Lim, M.D.
Charleston

Diabetes Meeting

The West Virginia Affiliate of the American Diabetes Association will meet in Parkersburg, May 5-6. The topic will be 'What's New in Diabetes?' Featured speakers will include Patrick Ober, M.D.; Steven Leichter, M.D.; Stephen H. Schneider, M.D., and Frank L. Schwartz, M.D. For registration, contact Cherrie Cowan, R.N., Camden Clark Memorial Hospital. Phone (304) 424-2400.

Surgeons Plan CME Meeting in April

The spring CME meeting of the West Virginia Chapter, American College of Surgeons, will be held April 27-29 in White Sulphur Springs at the Greenbrier.

Some 26 speakers will discuss subjects including breast cancer, carcinoma of the urinary bladder, CO_2 laser surgery for oral cancer, pediatric empyema, head and neck tumors, post cancer ablation reconstruction, Northgate SO-3 Extracorporeal Shock Wave Lithotripter, breast biopsy with needle localization, cardiac tumors;

pediatric trauma, burn injury, peripheral vascular injury, forearm fractures, pentoxifylline therapy in peripheral vascular disease, initial evaluation of the multiple-injury patient, impalement injury, management of wounds of the great vessels;

increased mortality rates after cataract surgery, carcinoma of the esophaghus, neonatal aortic thrombosis, prostate-specific antigen—a new tumor marker for adenocarcinoma of the prostate, wounds and vitamins, congenital cystic disease of the lungs in the neonate, hypovolemic and septic shock, and colonic polyposis with malignant transformation.

Guest Speakers

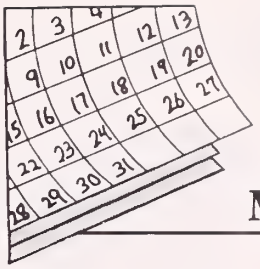
Guest speakers will include Alvin L. Watne, M.D., Professor and Chairman of Surgery, University of Illinois College of Medicine; and Robert J. Baker, M.D., Professor and Vice Chairman of Surgery, Jefferson Medical College; and Dean, Cook County Graduate School.

Thomas H. Chang, M.D, of Clarksburg is President of the state chapter.

The program is approved for 10 hours of Category 1 credit.

Other officers are D. Verne McConnell, M.D., Wheeling, First Vice President; Eric P. Mantz, M.D., Charleston, Second Vice President, and Roger E. King, M.D., Morgantown, Secretary/Treasurer.

Herbert Warden, M.D., is Governor.



Medical Meetings

April

2-5—Am. Society of Abdominal Surgeons, Tampa, Fla.

13-16—Am. College of Physicians, San Francisco.

14-16—West Virginia Chapter, Am. Academy of Family Physicians, Morgantown.

22—WVSMA Loss Control Seminar, First Generation, Bluefield

27-29—WV Chapter, Am. College of Surgeons, White Sulphur Springs.

28-30—International College of Surgeons—U.S. Section, San Francisco.

May

5-6—WV Affiliate, Am. Diabetes Assoc., Parkersburg

7-12—Am. Roentgen Ray Society, New Orleans.

8—Am. Assoc. for Thoracic Surgery, Boston.

11-14—Am. Geriatrics Society & Am. Federation for Aging Research Annual Meeting (46th), Boston.

13-19—Am. Society for Gastrointestinal Endoscopy, Washington, DC.

14-17—Am. Thoracic Society, Cincinnati.

17-19—Am. Trauma Society, Washington, DC.

21-23—Am. Society of Clinical Oncology, San Francisco.

June

18-22—AMA Annual Meeting, Chicago.

18-22—International Conference on Preventive Cardiology (2nd), Washington, DC.

20-21—Society of Vascular Surgery, New York.

July

16-22—10th World Medicine Games, Montreal.

August

16-20—122nd Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Obituaries

FRENCH R. MILLER, M.D.

Word recently was received by the *Journal* of the death of Dr. French R. Miller, Morgantown urologist, on November 12, 1988, at his home. He was 78.

He was on the staff at St. Vincent Pallotti Hospital at the time he became ill 18 years ago and retired from practice.

Doctor Miller, born in Kingwood, was graduated from West Virginia University, and received his M.D. degree in 1937 from Rush Medical School of the University of Chicago. He interned at Ohio Valley General Hospital in Wheeling, and received his urological training at the University of Pennsylvania in Philadelphia.

A veteran of World War II, he was a life member of the American Urological Association and an honorary and retired member of the Monongalia County Medical Society West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Anna Mary Girod Miller; one son, French R. Miller, Jr., Fort Lauderdale, Florida, and twin daughters, Patricica Ann Miller, Morgantown, and Pamela Ann Miller, Harrisburg, Pennsylvania.

Theodore and Jane Kotchen, faculty physicians at West Virginia University School of Medicine, Morgantown, have been working together for 15 years on research projects to understand the health problems of Appalachian people of all ages. See story on "WVU Page" (Page 164).

Biennial License Renewals Due

This year, 1989, is the year for biennial renewal of licenses to practice medicine and surgery in the State of West Virginia. The upcoming renewal period is July 1, 1989, through June 30, 1991.

West Virginia Board of Medicine regulations provide that renewal application forms shall be mailed to each known licensee at his or her **last known address.** It is imperative that physicians apprise the Board of any change in address to insure timely receipt of the biennial renewal form as well as other mailings from the Board, the Board said.

Board of Medicine regulations further state, "However, licensees are solely responsible for acquiring and submitting renewal application forms. Failure of the Board to mail a renewal form will not constitute justification for any physician to practice on an expired license."

If by the middle of May, 1989, you have not received your biennial renewal form, the Board advised, please check with your office personnel and with the Board so that there will be no interruption to your practice.

SHEC Conference

The State Health Education Council of West Virginia will hold its 10th annual conference April 23-26 at Canaan Valley Resort Park. The meeting will emphasize four areas: nutrition and fitness, alcohol and drug abuse prevention, cardiovascular health, and emotional health.

For additional information contact John M. Cavendish, conference chairperson at (304) 293-3903.

County Societies

McDOWELL

The McDowell County Medical Society met February 8 at Welch Emergency Hospital but postponed actions because of attendance until the next meeting scheduled March 1 at the Bonanza.—Jeffrey P. Palmer, M.D., Secretary.

MINGO

The Mingo County Medical Society met January 11 in Williamson at Savino's.

T. John Thambidurai, M.D., reviewed his year as Society President.

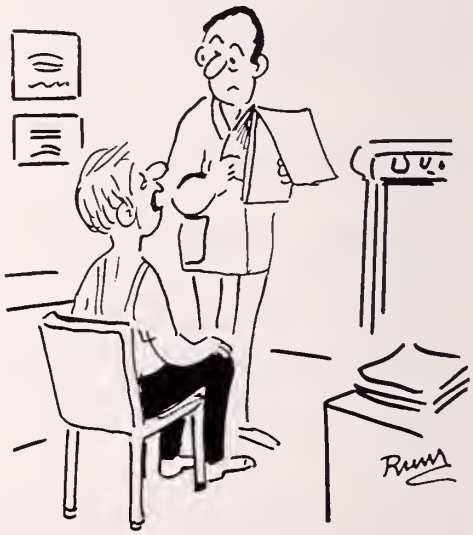
Membership for 1989 was emphasized, and new officers were elected.—Pastor C. Gomez, M.D., Secretary-Treasurer.

MONONGALIA

Robert D'Alessandri, M.D., Dean, West Virginia University School of Medicine, was speaker for the meeting of the Monongalia County Medical Society February 7. His subject was the physician and the community.

Paul B. Brown, Ph.D., WVU Department of Physiology and Biophysics, also spoke briefly on animal experimentation.

New meeting quorum requirements were approved.—Robert L. Murphy, Executive Secretary.



"Why have I changed doctors so much? Because they all bugged me about their overdue bills, that's why!"

New Members

The following physicians and students were welcomed in January and February as new members of the West Virginia State Medical Association:

Cabell
Mark R. Hoff, M.D.
1151 Hal Greer Boulevard
Huntington, WV 25701

Central
M. Nanette Auriemma, M.D.
10 Amalia Drive
Buckhannon, WV 26201

Peter R. Auriemma, M.D.
10 Amalia Drive
Buckhannon, WV 26201

Alan M. Hirsh, M.D.
Route 4, Box 9
Suite 1
Weston, WV 26452

Harrison
Joseph Stadelnikas, M.D.
United Hospital Center
P. O. Box 1680
Clarksburg, WV 26301

Kanawha
Nigh A. Trei, M.D.
761 Lower Donnally Road
Charleston, WV 25304

Marshall
Richard A. Simon, M.D.
Marshall County Professional Building
Eighth Street, Suite 102
Glen Dale, WV 26038

Monongalia
Lenore Breen, M.D.
WVU Medical Center
Department of Neurology
Morgantown, WV 26506

Steven A. McCormick, M.D.
WVU Medical Center
Department of Pathology
Morgantown, WV 26506

Pedro Ricardo Rademacher, M.D.
901 Richwood Avenue
Morgantown, WV 26505

Orval E. Riggs, M.D.
WVU Medical Center
Department of Surgery
Morgantown, WV 26506

Stephen Jeffrey Wetmore, M.D.
WVU Medical Center
Department of Otology
Morgantown, WV 26506

Angel M. Vasquez, M.D.
WVU Medical Center
Department of Family Practice
Morgantown, WV 26506

Ohio
Hugo J. Andreini, Jr., M.D.
Professional Center
4 Medical Park
Wheeling, WV 26003

Catherine Coleman, M.D.
Suite 200 Professional Center III
Medical Park
Wheeling, WV 26003

Parkersburg Academy
Steven Barnett, M.D.
St. Joseph's Hospital
Parkersburg, WV 26101

Michael S. McIntosh, M.D.
St. Joseph's Hospital
Emergency Room
Parkersburg, WV 26101

Donald Michels, M.D.
808 Division Street
Parkersburg, WV 26101

Preston
Thomas J. Havard, DO
Valley Professional Plaza
Box 270
Reedsville, WV 26549
South Branch

Felino Barnes, M.D.
P. O. Box 1019
Petersburg, WV 26847

John Lee Hahn, M.D.
P. O. Box 60
Petersburg, WV 26847

David L. Whetsell, M.D.
17 Early Avenue
Petersburg, WV 26847

Wetzel
Leela Chengappa, M.D.
260 Russell Street
New Martinsville, WV 26155

Manuel Tantoco, M.D.
65 Oriole Drive
New Martinsville, WV 26155

Residents
Susan Lynne Balk, M.D.
Route 12, Box 164
Morgantown, WV 26505

Steve Corder, M.D.
1588 Kilby Street
Charleston, WV 25311

Richard John DeAngelis, M.D.
1329 Headlee Avenue 1
Morgantown, WV 26505

Peter H. Edwards, Jr., M.D.
3121 North Greystone Drive
Morgantown, WV 26505

Janet Louise Griffin, M.D.
1332 Pineview Drive 16
Morgantown, WV 26505

Catherine J. Hyndman, M.D.
Route 1, Box 545
Mount Clare, WV 26408

Ellen Jacobsen, M.D.
140 Waitman Street
Morgantown, WV 26505

Stephen L. McNeil, M.D.
395 Laurel Street

Morgantown, WV 26505
Scott E. Miller, M.D.
101 29th Street 2
Charleston, WV 25304

Morgantown, WV 26505
Scott E. Miller, M.D.
101 29th Street 2
Charleston, WV 25304

R. Samuel Oliver, Jr., M.D.
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Morgantown, WV 26505

Al Osbahr, M.D.
2050 Donald Avenue
Huntington, WV 25701

Elizabeth L. Spangler, M.D.
690 Gordon Drive
Charleston, WV 25314

Ted D. Thornton, M.D.
203 Thurston Drive
Charleston, WV 25311

Alexander Vasilakis, M.D.
130 Horizon Drive
Morgantown, WV 26505

Boshra G. Zakhary, M.D.
2 Briar Patch Lane
Morgantown, WV 26505

Students
Paul Melville Thompson
22 Tanager Place
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Candy Kister, R.P.F.T.
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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

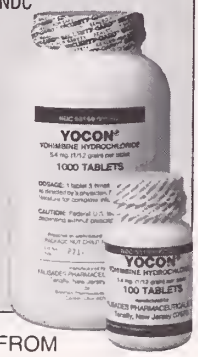
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



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Following are 1989 WESPAC members as of March 8. New WESPAC members will be reported next month.

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Patsy P. Cipoletti, Jr.

Cabell
G. O. McClellan
W. W. Mills
Doleno H. Webb, III

Central
*Arnold F. Gruspe
Joseph B. Reed

Eastern Panhandle
Romulo Estigoy
D. Ewell Hendricks
Edward P. Quarantillo
Michael Strider

Harrison
*James L. Bryant, II
Erlinda De La Pena
Joseph C. Kassis
Florencia Lopez
Gerardo Lopez
Teodoro G. Medina
Carlos A. Naranjo
James Weinstein
Amos W. Wilkinson

Kanawha
Stephen P. Cassis
*Glenn Crotty, Jr.
*Cecilio V. Delgra
*Donald E. Farmer
*Edmundo E. Figueroa
*P. F. Francke
*William L. Harris
Michael G. Holland
R. S. Iyer
C. W. Kim
*Romeo Y. Lim
Tony Majestro
*Lewis H. McConnell
Barbara U. Morgan
*P. B. Mukkamala
Lee L. Neilan
Arunthathie Rajaratnam
Harry R. Reynolds
V. T. Selvaraj
James L. Steele
*Herbert A. Tipler
Isidro P. Uy

Logan County
Ramanathan Padmanaban

Marion
E. G. Cadogan

Marshall
Kenneth J. Allen

Mercer
Nasim Ahmed
John Thomas Bell
*Larry Carson
*Yogesh Chand
*T. Keith Edwards
Gunther H. Frey
Edwart Litz
*John J. Mahood
Thomas J. Park
Kishor S. Pathak
Abdul R. Piracha
Thomas E. Richardson
*Edward M. Spencer

Monongalia
*Amitava Ghosal
Richard S. Kerr
Roger E. King
Stephen R. Powell

Ohio
*David A. Bowman
Robert A. Caveney
*Larry Dodd
*Carl J. Kite
Rex Lasure
*Derrick L. Latos
Howard Neiberg
*Frederick J. Payne
Edward P. Polack
*Martin D. Reiter
*Thomas J. Romano
*Alan M. Ruben
Richard Terry

Parkersburg Academy
Odilon S. Olivas
Alfred Prieto
*R. C. Sims
Anthony E. Twite
Paul E. Van Dyke

Raleigh
*Sung Chang
*William C. Covey, Jr.
*C. Richard Daniel
*Lewis N. Fox
*Lewis W. Gravely
*Anne D. Hooper
*William D. Hooper
*Ramon Jereza
Walter E. Klingensmith
*Raymond Lilly
*Joseph A. Maiolo
*Lamberto Maramba
*Owen C. Meadows, Jr.
*Amabile Milano
*George Orphanos
*Donald L. Rasmussen
*William A. Scaring
*Richard G. Starr
*Norman W. Taylor

South Branch Valley
Karl J. Reckenthaler
Robert E. Roberts
*Danine A. Rydland
Charles J. Sites

Western
David L. Mandry
Prasid Vongsnakorn

Auxiliary

Eastern Panhandle
Sara Hux Townsend

Harrison
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Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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1. Ann Intern Med 1982;96:766-71.

This space contributed as a public service.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Heart Disease Links Couple's Study Goal

(Editor's Note: See also photo on page 156).

The incidence of heart disease in West Virginia is among the highest in the nation. As with other health problems, heart disease results from an interaction of genetic and environmental factors, including high cholesterol, high blood pressure, obesity, cigarette smoking, diabetes, and sedentary lifestyles.

Poor nutrition, resulting in high cholesterol levels and obesity, is a major contributor to cadiovascular illness in Appalachia.

For the past 15 years Theodore and Jane Kotchen, faculty physicians at WVU School of Medicine, have been working together on research projects to understand the health problems of Appalachian people of all ages.

Since coming to WVU two years ago, the couple has concentrated on nutrition.

"When you are talking about cardiovascular disease, to a large extent you are talking about a disease caused or worsened by poor nutrition," said Theodore Kotchen, who is Chair of the Department of Medicine. "Because West Virginia has such a high incidence of heart disease, studies designed to reduce the risk factor can have considerable impact.

"We have developed multidisciplinary collaborative projects to address these risk factors. One study deals with the relationship of dietary salt and blood pressure; another deals with dietary fat intake and blood cholesterol; and other projects study various risk factors over a 15-year period in young adults and their families."

Jane Kotchen is particularly interested in preventing heart disease in children and adolescents. She is working on a pilot study of grade school children in Harrison County which will measure their cholesterol levels, find out how much they know about health and nutrition, and teach them about the benefits of good eating habits and exercise.

"Although we're doing the studies to give children information about themselves and help them with decision-making about their health, we're also collecting data and looking at it very carefully. We want to evaluate the impact of our program on reducing the risk of heart disease. If we find that it is beneficial, we may want to introduce these interventions into other communities."

Many of the Kotchens' studies are related to research they began together at the University of Kentucky in 1973 when they surveyed risk factors for heart disease, including blood pressure, in 1,100 students at a rural high school.

Ethics Committees Meet April 21

The second annual symposium of the West Virginia Network of Hospital Ethics Committees will be held April 21 at WVU.

This year's symposium focuses on health care of the elderly, including home and long-term care, life-sustaining treatment, advance directives such as living wills, and the cost of patient health care.

Health care professionals and the general public interested in ethical issues relating to the care of the elderly are invited to attend the one-day seminar to be held from 8 A.M. to 4 P.M. in the Health Sciences Center Addition Auditorium.

Twenty-six hospitals from the state were represented at last year's network meeting, and Alvin H. Moss, Chairman of WVU Hospitals' Ethics Committee, expects the number to grow this year.

He added that the way the elderly are treated is becoming a major focus today because, for the first time, there are more people over 65 years of age than under 18.

Keynote speaker for the symposium will be Dr. Norman Daniels, Chairman and Professor of Philosophy at Tufts University, who will give a lecture on "Resource Allocation over a Life Span" and participate in panel discussion concerning the conflict between the patient's wishes and the needs of society.

Thomas E. Finucane, Assistant Professor of Medicine at Johns Hopkins University, will give a physician's view on home care and long-term care of the elderly, and speakers in other disciplines will participate.

Murray on Thoracic Surgery Board

Gordon F. Murray, Chair of the Department of Medicine, has been appointed a director of the American Board of Thoracic Surgery. He will serve a six-year term.

The primary purpose of the board, which consists of 16 directors, is to set and maintain standards in thoracic surgery. It establishes qualifications and recertification of surgeons.

Doctor Murray has been Professor and Chair of Cardiothoracic Surgery at WVU since 1985, and was named Chair of the Department of Surgery in 1987.

Cancer Center Gift

The Daywood Foundation, a philanthropic organization based in Charleston, has continued its support of the Mary Babb Randolph Cancer Center with a recent gift of $15,000.

Since 1985, the Daywood Foundation has given a total of $70,000 to the Cancer Center through the West Virginia University Foundation, Inc.

Newton Thomas, president of the Daywood Foundation, said the money was given "in the interest of seeing West Virginia University and the programs it supports be successful."

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MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

Progestins Project Wins Research Day

Five research projects by medical students, residents and faculty were honored during the MU School of Medicine Research Day March 8 in Huntington.

The program featured 51 presentations describing the work of 93 researchers. Dr. Michael A. Zasloff of the University of Pennsylvania presented the event's keynote address.

Graduate student R. Thomas Bowden of Beckley won the highest honor, the Lester R. Bryant, M.D., Sc.D., Research Day Founder's Award, as well as the award for best poster presentation. His project, co-authored by Dr. Michael R. Moore, was "Growth-Related Effects of Progestins and Anti-Progestins in the Human Breast Cancer Cell T47D."

The Founder's Day Award, offered by the Graduate Student Association, includes a plaque and a $350 cash award. It goes to the best medical or graduate student presentation and honors Doctor Bryant, the former Medical School Dean who instituted Research Day at Marshall in 1988.

The award for best basic science presentation went to medical student Kevin J. Conaway of Hurricane. His presentation, co-authored by postdoctoral fellow Elsa Mangiarua and Dr. William McCumbee, Associate Professor of Physiology, was entitled "Is Beta-Adrenergic Stimulation Implicated in Vascular Hypertrophy?"

Dr. Jackson Flanigan, a Sistersville native and a graduate of the school, received the award for best clinical sciences presentation, His project "Papaverine Injection for Impotence," was co-authored by Dr. William E. Wheeler, Associate Professor of Surgery, and Dr. Rafael E. Molina, Clinical Professor of Surgery. Doctor Flanigan now is a surgery resident at Marshall.

Two residents shared the award for best case study. Dr. David S. Ratliff, a native of Ironton, Ohio, and an MU Medical School graduate, presented "Carcinoma of the Colon: An Unusual Metastatic Presentation" with co-author Rocco Morabito, M.D., Clinical Assistant Professor of Surgery. Dr. Christy Cugini, a medicine resident and a native of Washington, D.C., was honored for "Hypothalmic Lesion Causing Amenorrhea Diagnosed by Magnetic Resonance Imaging."

Moore to Tell NIH Meet of Finding

Michael R. Moore, Ph.D., has been invited to speak at a National Institutes of Health conference about a discovery he made concerning the growth of breast cancer cells.

Moore, a biochemist, will join 21 other researchers recognized as authorities on the effect of progestins on breast cancer. Speakers from five nations have been invited for the event.

The conference, Progestin Action and Progesterone Receptors in Breast Cancer, is April 6 and 7 in Washington, D.C.

Moore's findings, published in 1987, were contrary to the widespread belief that progestins inhibit the growth of human breast cancer. "We found that progestins actually stimulated growth of certain breast cancer cells in tissue cultures," he said.

"Since anti-estrogens are not completely effective therapy for some breast cancer patients, we at Marshall have proposed that treatment might be improved if anti-progestins were added," he said.

Wedding to Spend Year in Washington

Danny Wedding, Ph.D., is one of six medical faculty members nationwide chosen to spend a year in Washington, D.C., through the 1989-1990 Robert Wood Johnson Health Policy Fellowship Program.

Wedding is the first clinical psychologist to be selected in the program's 15-year history, as well as the first faculty member from a West Virginia medical school.

The program is designed to help medical educators take a more informed and active role in shaping health policy.

Wedding said he hopes to work on the areas of Medicare reform, cost containment, or delivery of mental health services to people in rural or poor areas. He particularly would like to work for the Senate's Health Care Finance Committee chaired by West Virginia Sen. John D. Rockefeller IV.

"There are tremendous needs for health and mental health services in impoverished and rural areas that just are not being met," said Wedding.

"These unmet needs have to be balanced against the reality of a massive federal deficit and limited health care dollars," he added. "I believe public policy must reflect the fact that not all treatments are equally effective and not all providers are equally qualified. For example, for some problems which have effective treatments, insurance companies and federal programs such as Medicare are still paying for generic treatments with no proven effectiveness."

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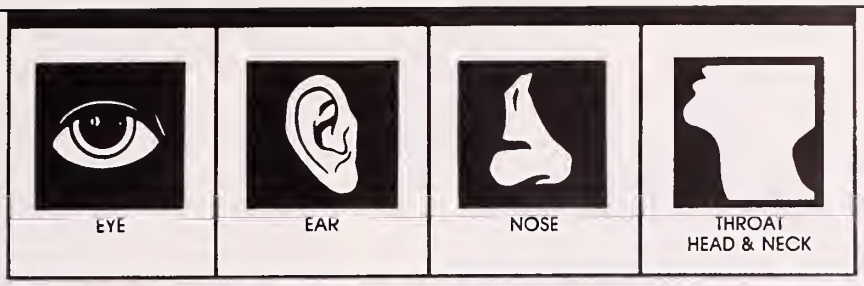

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Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

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OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

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1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema.* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia. In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy — Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

Hypertension: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest; pulmonary embolism and infarction; rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment. The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

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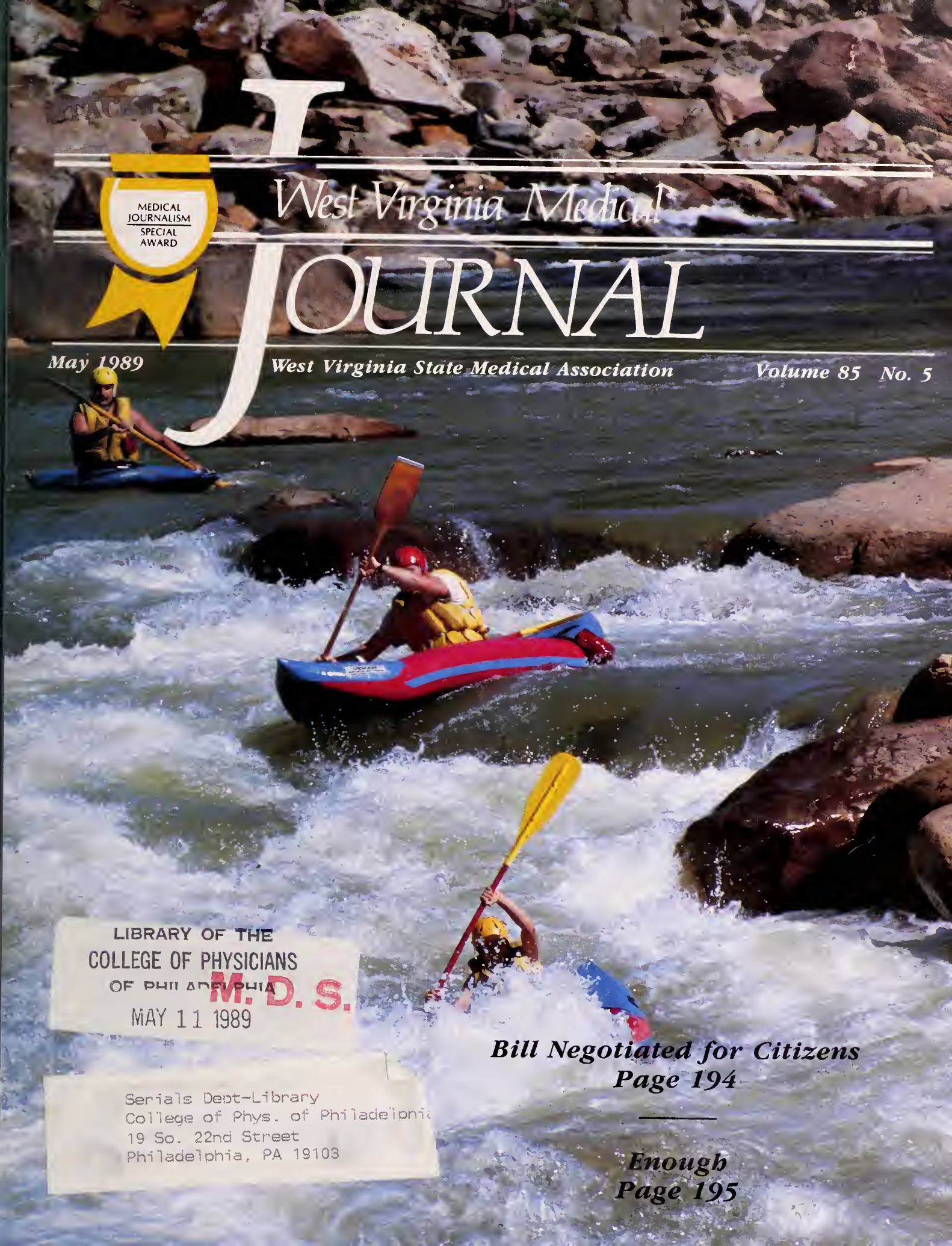

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For your brochures or other information about Lithotripsy and our kidney stone treatment program, call CAMC at 1-800-654-0159.

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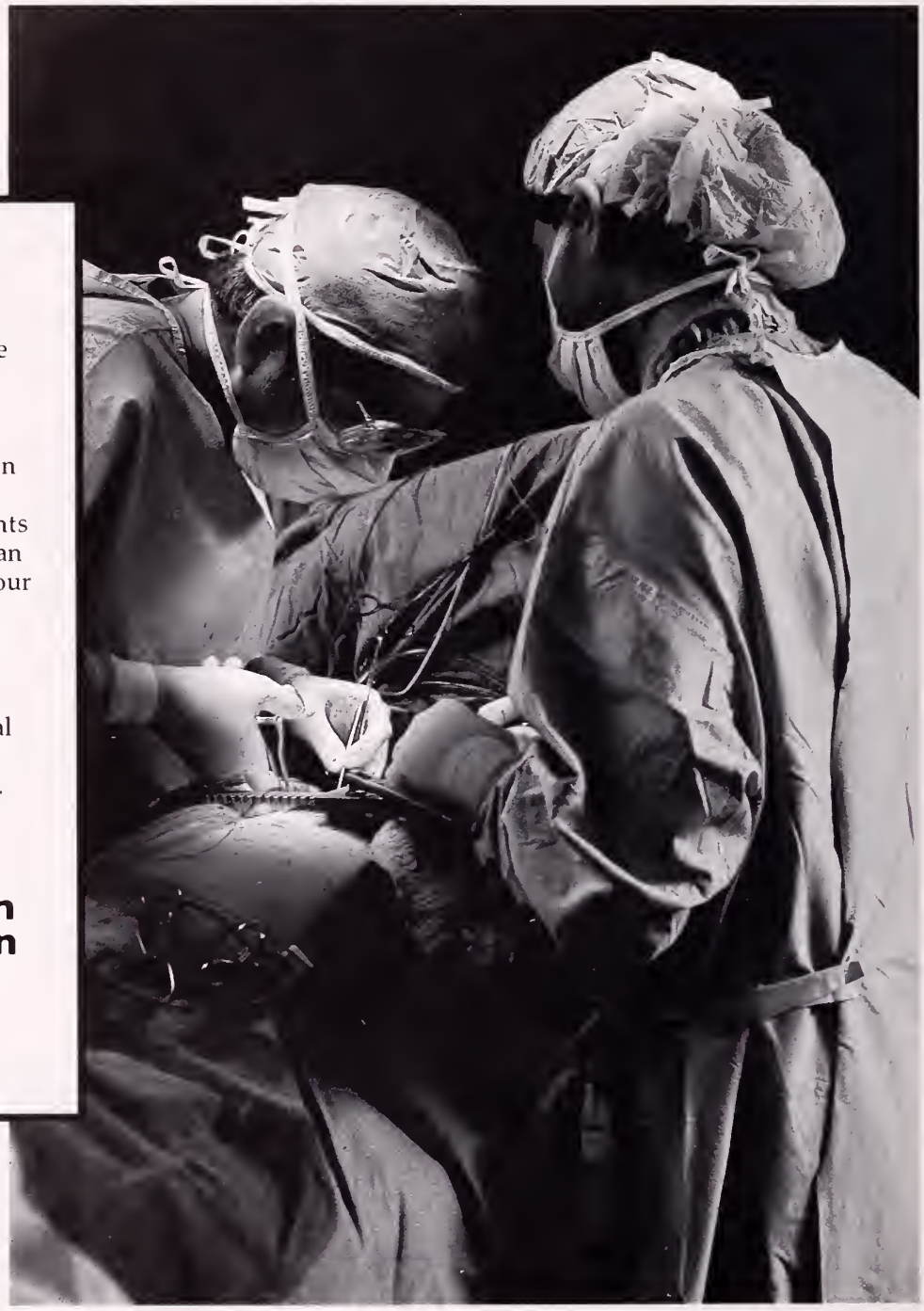

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

West Virginia Medical
JOURNAL

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Charleston Area Medical Center Experience

Long-Term Survivors of Small-Cell Carcinoma of the Lung

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Small-cell carcinoma of the lung has been shown to be quite responsive to chemotherapy. Unfortunately, these responses are often short in duration, and long-term, disease-free survival is infrequent. This review of tumor registry records of all patients with small-cell carcinoma of the lung treated at Charleston Area Medical Center (CAMC) from 1962 to 1983 showed that 21 of 500 (four per cent) survived 30 months or longer. Eighteen patients had limited-extent disease.

Although the majority of patients received chemotherapy alone or chemotherapy and radiation, there were survivors in all treatment groups (i.e. surgery alone or radiotherapy alone). Six of the 21 long-term survivors eventually had relapses occurring as late as 88 months after diagnosis. The overall poor survival of patients with small-cell lung cancer suggests a need for the development of novel initial approaches to therapy.

Chemotherapy and radiotherapy have resulted in dramatic responses in small-cell carcinoma of the lung. In the Veterans Administration Lung Cancer Study Group, patients with small-cell lung carcinoma treated with supportive care survived only a median of seven weeks (1). Numerous regimens utilizing combination chemotherapy with or without radiation therapy have resulted in a median survival of approximately one year (2). However, despite high initial response rates, numerous studies subsequently have demonstrated that relapse is the rule, with a two-year survival of only 10 per cent to 15 per cent (2).

This report analyzes long-term survivors with small-cell carcinoma of the lung treated at Charleston Area Medical Center (CAMC). The results obtained from this study are compared to published series.

Patients and Methods

The tumor registry records of all patients with the diagnosis of small-cell carcinoma of the lung treated at CAMC from 1962 to 1983 were reviewed to identify those surviving more than 30 months.

Before entry, the diagnosis was confirmed by review of the pathologic material by the Department of Pathology of CAMC. Staging procedures depended on the year of presentation and included chest x-ray, bone marrow aspiration and biopsy, brain scanning or computed tomography of the brain, liver scan, abdominal CT scan, bone scan, and bronchoscopy or thoracotomy. Patients were considered to have limited-extent disease if their tumor was limited to the ipsilateral hemithorax, supraclavicular nodes or pleura.

Survival was dated from the time of initial diagnosis. Thus, survival was the length in months from initial diagnosis to death, or, in sur-

TABLE 1
Long-Term Survivors at CAMC

Patient Number	*Age/Sex*	*Extent of Disease*	*Chemotherapy*		*Lung Radiotherapy (Rads)*	*Prophylactic Cranial Radiotherapy (Rads)*	*Surgery*	*Survival (Months)*
1	65 F	Limited	CCM	6 months	3500	0	—	71
2	51 M	Limited	MACC	2 months	3500	2400	—	40
3	70 M	Limited		—	5500	0	—	88
4	65 F	Limited	CAV	12 months	5500	0	Lobectomy	76
5	37 F	Limited	CAV	6 months	5500	0	Lobectomy	33
6	59 F	Extensive	MACC	18 months	0	0	—	33
7	68 F	Limited	MACC	12 months	0	0	Lobectomy	67*
8	62 F	Limited	CAM	5 months	3500	0	—	65*
9	68 F	Limited	CAM	8 months	0	0	—	56
10	58 F	Limited		—	5000	0	—	51
11	55 F	Limited	MACC	4 months				
			CAM	6 months	2000	3000	—	31
12	65 M	Limited	MACC	12 months	0	0	Lobectomy	54*
13	65 M	Limited	MACC	15 months				
			MCC	8 months	0	3000	Lobectomy	40*
14	53 F	Extensive	MACC	12 months	5500	0	—	43*
15	64 F	Extensive	MACC	12 months	0	3000	—	42
16	55 M	Limited		—	0	0	Lobectomy	39*
17	76 F	Limited	MACC	24 months	5000	3000	—	46*
18	65 F	Limited	MACC	12 months	0	0	Lobectomy	32*
19	67 F	Limited	CAV	8 months	5000	3000	Lobectomy	38*
20	55 F	Limited	CAV	10 months	0	0	—	33*
21	54 M	Limited	MACC	28 months	0	0	Lobectomy	33

Still alive as of March, 1986*

viving patients, from initial diagnosis to March 1, 1986. Tumor type was documented at the time of relapse (except in patients with central nervous system relapse) by histologic and/or cytologic study.

Results

Five hundred patients with previously untreated small-cell lung carcinoma were seen at CAMC from January, 1962, to January, 1983. Of these, 21 (four per cent) survived 30 months or longer.

Patient characteristics are summarized in Table 1. The median age of the patients was 64 years, with an age range from 37 to 76 years. There were 14 females and seven males. Eighteen patients had limited-extent disease, and three had extensive disease at the time of diagnosis. Of those with extensive disease, two had contralateral supraclavicular adenopathy, and one had a single scalp metastatic lesion.

Patient survival times ranged from 32 to 88 months. As of March, 1986, 11 patients remained alive and disease-free at 67, 65, 54, 40, 43, 42, 39, 46, 32, 38, and 40 months.

The initial therapy included: chemotherapy and radiotherapy in six patients; surgery, radiotherapy and chemotherapy in five; surgery and chemotherapy in four; chemotherapy alone in three; radiotherapy alone in two, and surgery alone in one.

Thirteen patients received radiotherapy. Twelve received chest radiotherapy (dose range: 2,500-5,500 rads), and six received prophylactic brain radiotherapy (2,400-3,000 rads, whole brain).

Of the 18 patients who received chemotherapy, the most common regimens used were: methotrexate, adriamycin, cyclophosphamide, and CCNU (11 patients); cyclophosphamide, adriamycin and vincristine (4); cyclophosphamide, adriamycin and methotrexate (2); and cyclophosphamide, CCNU and methotrexate (1). The duration of chemotherapy use ranged from two to 28 months.

The causes of the 10 deaths in this series were recurrent small-cell lung carcinoma in six patients, cardiac disease in two, a cerebrovascular accident in one, and an automobile accident in one.

TABLE 2
Small-Cell Lung Cancer
Long-Term Survival (more than 24 months)
Summary of Prior Studies

Author	*Number of Patients*	*Surgery Alone*	*Radiotherapy Alone*	*Chemo + XRT*	*Chemo Alone*	*Surgery + Chemo*	*Surgery + XRT + Chemo*	*L D*	*E D*	*Number With CR*
Kalter et al.	43	1	4	29	4	5	—	36	7	43
Looper et al.	18	—	—	18	—	—	—	—	—	—
Livingston et al.	17	—	—	17	—	—	—	11	6	—
Osterlind et al.	53	—	—	35	18	—	—	43	10	29
Vogelsang et al.	25	—	—	16	9	—	—	20	5	15
Johnson et al.	40	—	—	30	10	—	—	34	6	—
Peschel et al.	17	2	9	5	—	1	—	15	2	12
Mathews et al.	96	23	19	25	8	21	—	88	8	—
TK George et al.	18	6	4	4	4	—	—	—	—	—
Volk et al.	8	—	—	8	—	—	—	7	1	—
Davis et al.	105	39	—	64	—	—	—	63	21	—
Polares et al.	6	—	—	5	1	—	—	5	1	—
Present Series	21	1	2	6	3	4	5	18	3	—
TOTAL	467	72 (15.4%)	38 (8.1%)	262 (57%)	57 (13%)	31 (5.5%)	5 (1%)	340 (78.8%)	70 (21.2%)	99 (75%)

Initial sites of relapse in the six patients with recurrent small-cell carcinoma included one with recurrent disease only in the lung, four with disease only at distant sites (small intestine, brain, liver, and meninges, respectively), and one with both distant and local disease (lung and bone).

Discussion

Table 2 summarizes the characteristics and treatment of long-term survivors of small-cell lung carcinoma (i.e. two-year or longer survival) obtained from previously published reports (3-15). These patients received the following therapy: surgery only, 15.4 per cent; surgery and other modalities (i.e. radiation and/or chemotherapy), 6.5 per cent; radiotherapy alone, 8.1 per cent; radiotherapy and chemotherapy, 57 per cent; and chemotherapy alone, 13 per cent. The majority of patients (78 per cent) presented with limited-extent disease. In the four studies which provide information about response rate, most of the long-term survivors (75 per cent) had a complete response to chemotherapy. The duration of survival ranged from two to 11.3 years.

The long-term survivors described in this study were similar to those described in the literature. Specifically, long-term survival occurred predominantly in patients with limited-extent disease at presentation. Although most long-term survivors received chemotherapy or chemotherapy and radiation, there were long-term survivors in all treatment groups. In this study, the longest survivor (88 months) received radiotherapy alone. In spite of the prolonged survival, the majority of patients in this series and others died from recurrent small-cell carcinoma (Table 3). Such recurrences emerged as late as 11 years from diagnosis. Cardiac and cerebrovascular disease were the commonest causes of non-malignant death.

Second malignancies have been reported in patients treated for small-cell carcinoma of the lung. As noted in Table 3, second malignancies accounted for slightly greater than 20 per cent of deaths. Acute non-lymphocytic leukemia and non-small-cell lung carcinoma were the commonest malignancies noted. This is consistent with the rather dramatic incidence of second malignancies found in patients with all types of lung cancers. In a review of 400 patients with lung cancer of all histologic types, Reynolds et al. (16) reported a 10-per

cent incidence of second malignancies. In this series, one patient developed a squamous-cell carcinoma of the larynx 40 months after the initial diagnosis of small-cell lung carcinoma. The increased incidence of second malignancies may be due to prior treatment or may reflect the mixed histologic features found in lung cancer.

Nine of the long-term survivors in this series underwent surgical resection as initial therapy. Surgery in small-cell lung cancer was abandoned in the late 1960s but currently is being reassessed cautiously after the Armed Forces Asymptomatic Pulmonary Nodule Study demonstrated an unexpectedly prolonged five-year survival (36 per cent) with surgery. Subsequent prospective studies have reported five-year survival following resection in 22 to 83 per cent of patients with local (i.e. Stage 1) disease (18). Two recent retrospective studies have indicated an improvement in two-year survival in those patients undergoing initial surgical resection (14, 19). Whether the benefit of initial resection in limited small-cell lung cancer on survival is caused by, or incidental to, resection remains to be clarified in randomized prospective clinical trials of carefully staged patients.

In summary, only a small percentage (i.e. five-10 per cent) of patients treated for small-cell carcinoma of the lung survive two or more years. Many of these survivors eventually have relapses. There is an impressive discrepancy between the rate and magnitude of the initial response and ultimate survival. Obviously, new approaches to treatment are necessary if progress is to continue.

TABLE 3
Small-Cell Lung Carcinoma
Causes of Death

	TOTAL NUMBER	*RECURRENT SMALL CELL*	*SECOND MALIGNANCIES*	*NON-MALIGNANCY AT TIME OF PUBLICATION*	*STILL ALIVE AT TIME OF PUBLICATION*
Vogelsang	25	13	3: 2 AML 1 NSCLC		9
Johnson	40	10	8: 6 NSCLC 1 AML 1 Gastric ca	3: 2 Sudden death 1 Acute neurologic deterioration	19
Volk	8		4: 2 AML 1 NHL 1 Squamous cell ca	1 Pneumonia 2: 1 Dementia	1
Pollares	6	2	—	—	6
Peschel	17	7	1: G.I. tumor	1: Myocardial Infarct	8
Davis	105	—	—	—	—
Osterlind	53	13	11: 5 NSCLC 1 Cervix 1 NHL 1 Astrocytoma 2 AML 1 Renal cell	12: 5 Cardiac disease 1 Cobalt poisoning 1 CVA 1 Brain XRT sequella 1 Bronchitis 2 XRT fibrosis 1 Cirrhosis	17
T K George	18	—	—	—	—
Livingston	17	5	—	2: 1 CHF 1 Neurologic	10
Kalter	43	11	—	6: 2 Heart disease 1 Hemoptysis 3 Neurologic	26
Looper	18	—	—	3: 2 Heart disease 1 Neurologic	15
Present Series	21	6		4: 2 Cardiac 1 Neurologic 1 Auto accident	11
TOTAL	258	67	28	33	122

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Glomerulonephritis and Sinusitis

Hypocomplementemic Glomerulonephritis Associated With Coagulase-Negative Staphylococcal Pansinusitis and Subdural Empyema

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A 16-year-old male developed acute hypocomplementemic glomerulonephritis in association with pansinusitis and subdural empyema. Nephrotic-range proteinuria, serum complement, and renal function rapidly returned to normal with antimicrobial therapy and surgical drainage of both infected cavities. Culture of the exudate obtained during drainage of the frontal sinus yielded pure growth of coagulase-negative staphylococcus.

This case documents the association of acute hypocomplementemic glomerulonephritis and pansinusitis-subdural empyema due to coagulase-negative staphylococcus, not previously described.

Introduction

Hypocomplementemic glomerulonephritis has been reported in numerous infectious settings, particularly infected ventriculoperitoneal and atrial shunts, visceral abscesses, bacterial endocarditis, and pneumococcal pneumonia (1-6). A literature review has failed to reveal a previous report of this entity associated with coagulase-negative staphylococcal sinusitis and subdural empyema. This case report outlines the clinical course of such a patient.

Case Report

A 16-year old, previously healthy white male was transferred to our hospital for evaluation of his first seizure. He had been taken to another emergency room because of profound lethargy, inappropriate answers and a fever. He had complained of two to three weeks of headaches, post nasal drainage and the recent occurrence of dark urine. He denied joint symptoms, abdominal pain, nausea, vomiting, cough or hemoptysis. There had been no chest pain or dyspnea. He had no history of illicit drug use.

Physical examination revealed a well-developed, well-nourished, white male. His blood pressure was 100/60, and his temperature was 104° rectally. A purulent exudate was noted in his posterior pharynx. He had no skin rash, petechiae, Roth's spots or splinter hemorrhages. Lungs were clear. There was no murmur. Abdominal, genital and rectal examinations were within normal limits. There was no lymphadenopathy.

His initial neurologic examination was without localizing findings; however, he developed transient left leg weakness later. His white blood cell count was 29,700 per mm³, and hemoglobin was 11.8 gm/dl. Urinalysis revealed red cell casts and 300 mg/dl of protein. Serum creatinine was 2.2 mg/dl. Cerebral spinal fluid

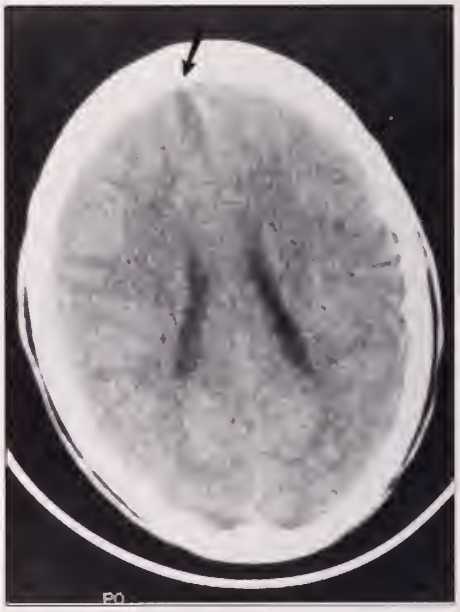

Figure 1. CAT scan indicating a left frontal-parietal abscess (arrow).

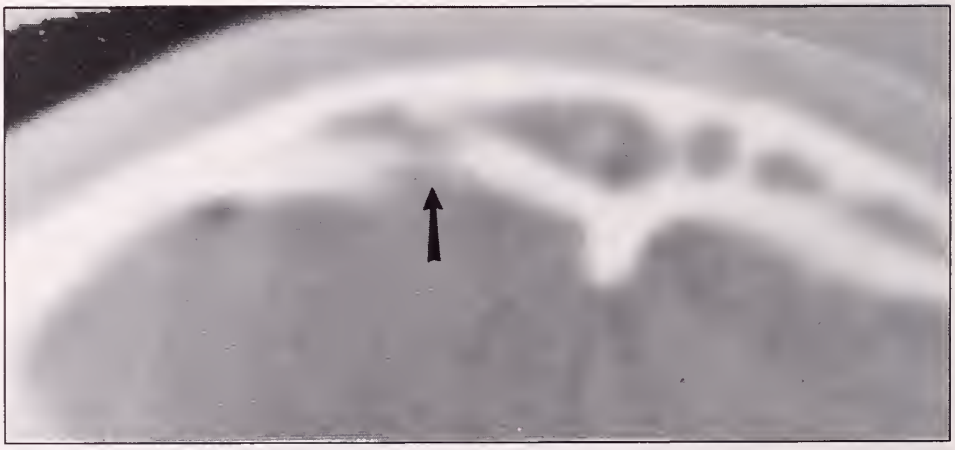

Figure 2. CAT scan showing erosion of the posterior wall of the left frontal sinus with communication into subdural space.

TABLE

	Hospital Day				
	1	*2*	*4*	*11*	*30*
BUN mg/dl	29	32	30	10	17
Creatinine mg/dl	2.2	2.4	1.9	1.0	0.8
Urinary protein g/24h	12.1	—	—	0.6	<0.1
Ccr ml/min	67	—	—	—	153
C'3 mg/dl (83-117)	—	40	—	—	120
C'4 mg/dl (15-45)	—	29	—	—	24

cell count was 37/mm³ with 62 per cent polymorphonuclear leukocytes. Serum C3 was 40 mg/dl (normal 83-117 mg/dl); C4 was 29 mg/dl (normal 15-45 mg/dl). His ASO titer was 883 Todd units, and immune complex C_2Q was 1.2 mcgMHG/ml (normal 0-12). A 24-hour urine collection contained 12 grams of protein.

His chest x-ray was within normal limits. Sinus films revealed pansinusitis with early bone destruction in the left orbital roof. Computerized axial tomography of the head revealed a subdural collection of fluid in the interhemispheric region of the left frontoparietal lobe with disruption of the posterior wall of the left frontal sinus (Figures 1, 2).

Cultures of his spinal fluid were negative, but cultures of the exudate obtained during surgical drainage of his frontal sinus grew coagulase-negative staphylococcus. Cultures from the subdural empyema obtained at the time of surgical drainage were negative. However, he had received antibiotics prior to surgery.

After drainage of his frontal sinus and evacuation of the subdural empyema, his urinalysis, serum creatinine and serum complement returned to normal values (Table).

Comment

Both coagulase-negative and coagulase-positive staphylococci have been clearly documented as infective agents capable of producing glomerulonephritis during bacterial infections (2, 5). In these cases an immunologic mechanism seems likely. Total complement and C3 are usually decreased, and cryoglobulins and rheumatoid factor are often present (7-9). On kidney biopsy the immunofluorescence is consistent with deposition of immune complexes. In some cases a bacterial antigen has been eluted.

Although there is no renal biopsy documentation in this case, the clinical course and laboratory abnormalities support a diagnosis of infectious hypocomplementemic glomerulonephritis in association with coagulase-negative staphylococcal pansinusitis and subdural empyema. This occurrence is distinctly unusual in the setting of a normal host without a foreign-body source of infection.

Role of Protein A

Staphylococcus aureus contains protein A in its cell wall which likely is responsible for the immunologic sequelae associated with infections due to this organism. Coagulase-negative staphylococci do not contain this cell wall substance. Although infections involving the latter organisms are largely complications of indwelling catheters or foreign bodies, recent reports have implicated coagulase-negative staphylococci as etiologic agents in normal hosts as well. Although this patient had been treated with antimicrobial agents prior to obtaining cultures of his frontal sinus and empyema, it is not likely that a pure culture of coagulase-negative staphylococcus would have been obtained as a contaminant.

"A literature review has failed to reveal a previous report of this entity associated with coagulase-negative staphylococcal sinusitis and subdural empyema."

Even if this organism were not the primary infecting organism, the association of acute infectious sinusitis and acute glomerulonephritis is not widely recognized. The cases from a single report (10) are poorly described and provide little clinical information. However, in 70 of the 93 children with glomerulonephritis and sinusitis, sinusitis was the only focus of infection. Twenty-one per cent had nephrotic syndrome, and 41 per cent had hypocomplementemia.

In patients with visceral abscesses, rapid recovery of renal function and resolution of heavy proteinuria followed treatment of a contained abscess (3). In these cases, the infecting organisms were mostly gram-negative, although S. aureus was implicated in three of 11 cases. Nearly half of the patients in this report had positive blood cultures. Similar to our case, hypocomplementemia was noted in several cases including one with C_3-splitting activity (C_3SA), suggesting activation of the alternative pathway. Assays for C_3SA were not performed in our patient.

Summary

In summary, this case illustrates an unusual combination of acute bacterial sinusitis and subdural empyema with acute nephrotic syndrome and renal insufficiency. The infecting organism was felt to be coagulase-negative staphylococcus, not previously shown to cause this entity. Complete recovery of renal function ensued with surgical drainage and antibiotic therapy.

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Part 2. Bees and Vespids

Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Bites and Stings

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Editor's Note: Part 1, "Spiders," appeared in the April Journal (Page 145).

For the second case, I will borrow from Frazier's and Brown's book, *Insects and Allergy*. They describe a European in Africa who was attacked by a swarm of bees alongside a river bank. To try to escape them, he jumped into the shallow river as they quickly coated him with their bodies to a depth of about three inches. He began to vomit and have vigorous diarrhea as he became ill from a massive injection of venom. He sank as low as possible in the water and tried to cover his head with his shorts and his arms with mud. The bees swarmed into the breathing hole that he had to maintain, and they crawled into his mouth, nose and ears. Finally, he began to bite at the bees. In all he spent four and a half hours in the river.

At the hospital 2,243 stings were counted. His upper body was dark with stingers. There were 221 stingers in his lips, tongue, oral mucosa and eyelids. Surprisingly, he recovered after five days in the hospital.

Bees and Vespids

The "killer bee" case just given is but one of a large number of dramatic tales that have been told about the bees and the vespids. Bees and vespids (wasps, yellow jackets and hornets) are families in the order hymenoptera. Agribusiness is totally dependent on bees, and there is federal relief money available to farmers in areas where spraying causes a major bee kill. Vespids too are significant pollinators as well as valuable parasite carnivores that control flies, aphids, plant-eating worms, larvae etc.

Hymenoptera sting rather than bite. They use a modified ovipositor that consists of a hollow tube with two lancets. All of these species (there are five thousand species of bees alone) can sting repeatedly, but the honeybee's stinger has a prominent barb that catches firmly in tough tissue like human skin. As the bee struggles to free itself, the stinger and venom sac are torn from the abdomen, and this kills the insect.

"Killer bees will be in the United States in a year or so but seem to be range-limited to climates with winter temperatures averaging above 60°F. . . "

Although their habitats and behavior vary, the various species of bees and vespids seem to be very similar in the effects of their venoms. The highly aggressive African bee that was imported into Brazil because of its greater honey production and then escaped and became known as the killer bee is not more toxic, but simply more trigger happy, than others. Killer bees will be in the United States in a year or so but seem to be range-limited to climates with winter temperatures averaging above 60°F, so these bees are not expected to be a threat to most readers of the *West Virginia Medical Journal*.

Venom: The average honeybee sting delivers 50 micrograms of venom. Bee and vespid venom is chiefly protein by dry weight, with some carbohydrate and lipid also present. There are the enzymes phospholipase A and hyaluronidase, as well as kinins in yellow jacket venom, and acetylcholine in hornet venom. The most significant of the venom's contents are the multiple antigenic substances that generate an immune sensitization. From one to four per cent of humans test positive for allergic sensitization to hymenoptera, although the significance of allergy testing is a matter of long-standing debate.

Clinical course and treatment: The non-allergic response to one or a few stings is not of great consequence and can be ameliorated by ice, antipruritics such as antihistamines and hydrocortisone cream, and acetaminophen. For bee stings, look for the embedded stinger and remove this by flicking it outward with a plastic credit card or knife blade edge, not by grasping it; the venom sac often is still attached and a squeeze with fingers or forceps will inject any venom still remaining in the sac or the stinger itself.

The toxic picture from multiple stings does not have specific treatment. Hydration (if clinically indicated), analgesia, close observation and supportive care usually are sufficient in patients who survive to reach the hospital. Death from bee or vespid venom poisoning, as opposed to venom allergy, is rare in the United States, and usually occurs only in individuals who sustain many dozens of stings at one time.

Other Responses

Other responses to these stings occur in various forms. At the lesser end of the spectrum, *generalized urticaria or large local reactions* are not in themselves serious but are harbingers of possible impending or future life-threatening reactions. The following case is an example. After retirement, a man devoted time to working in his yard and garden. One day he was stung on the hand by a bee, and over the

next few hours his entire arm swelled severely. He had no systemic symptoms and did not see a doctor. Later that summer he suddenly collapsed in his yard. His wife assumed he had sustained a heart attack, and called an ambulance. The emergency medical technicians found him unresponsive and pulseless, and advanced life support protocol was carried out—including the administration of epinephrine. The resuscitation was successful. When consciousness returned, the man complained about those nasty bees. Sure enough, a stinger was found in his neck. This man's large local reaction heralded the subsequent occurrence of anaphylaxis when he was stung the second time.

Large Local Reaction

A large local reaction is defined as marked swelling of all or part of an extremity, the face or the tongue. This swelling may be urticarial, i.e. superficial, or may be angioedematous, involving the full thickness of the dermis and extending into subcutaneous tissue, with a firmer feel than shallow edema. Both urticarial and large local reactions have the potential to progress at any time within the next few days into a more severe generalized reaction.

Treatment with antihistamines, acetaminophen and three days of oral prednisone (about one mg/kg per day, single dose) will reduce swelling, decrease pain and provide some protection against progression. The stung patient who presents initially with the acute onset of dramatic urticaria, however, should be regarded as being at the beginning of a major reaction, and usually should be treated immediately with subcutaneous epinephrine as well as parenteral antihistamines and a high steroid dose. A large-bore IV cannula should be inserted in that patient to permit fluid resuscitation if hypotension ensues. Observation for at least an hour is required, until the urticaria have nearly resolved.

Frequently, large local reactions occur after a delay varying from several hours to a couple of days. Except for the timing, these *delayed local reactions* probably are no different from early large local reactions. The implications and the treatment are the same. Occasionally a patient will appear with a red, swollen hand a day or two after a sting, and the appearance will resemble equally an allergic reaction and cellulitis. Treatment in those cases should be for both problems. Infection is common after vespid stings and uncommon after bee stings.

Mast-Cell Release Reaction

Of greatest concern is a widespread mast-cell release reaction, usually anaphylactic (IgE-mediated) but also perhaps occasionally anaphylactoid (occurring through other mechanisms). In addition to massive histamine release, these reactions involve activation of the arachidonic acid cascade and subsequent production of many inflammatory substances. From 40 to 100 people in the United States are reported annually as having died from bee or vespid stings. These insects cause roughly 10 per cent of the anaphylactic/anaphylactoid deaths annually reported in the United States.

"For massive urticaria or the first sign of one of the three life-threatening situations, epinephrine is an excellent first treatment."

IgE cross-reactivity to bees and vespids occurs in about 10 per cent of sensitized individuals. Individuals sensitized to the venom of one vespid usually, but not always, are sensitive to all three types of vespids.

The three potentially lethal features of anaphylactic or anaphylactoid responses are *laryngeal edema, bronchospasm,* and *marked vasodilation with hypotension (distributive shock).* A patient may incur any or all of these life-threatening developments. Recurrent episodes often follow the pattern of the first occurrence in a given individual.

Epinephrine

For massive urticaria or the first sign of one of the three life-threatening situations, epinephrine is an excellent first treatment. It inhibits edema formation, it is a bronchodilator and it constricts the vascular bed. An antihistamine should be given intravenously at once as well (diphenhydramine 25 to 50 mg IV in adults). Although there have been a number of textbook statements that antihistamines do not alter the course of major anaphylaxis, one does not see specific references cited to support such claims. Histamine receptor blockers do inhibit to some extent the progression of edema, loss of vascular tone and increase in vascular permeability that are some of the chief manifestations of histamine effect.

Antihistamines are not an adequate substitute for epinephrine, however, because many other mediators such as kinins, leukotrienes, thromboxane and prostaglandins are generated by activation of the cyclooxygenase and lipoxygenase pathways and other mechanisms. Those mediators produce effects similar to those of histamines, but are not blocked by antihistamines. When time permits, corticosteroids also should be given although they probably do not have much immediate effect.

Stridor, Bronchospasm and Shock

Stridor due to laryngeal edema is an indication for immediate intubation, which is difficult in these patients because they often are fully alert. Sedation and sometimes paralysis may be necessary. A person competent at emergency cricothyrotomy should be present. A comment: Avoid requesting an "emergency tracheostomy"; that procedure requires controlled conditions and takes considerable time. Scalpel or needle entry of the cricothyroid membrane is the correct procedure today for emergency treatment of airway obstruction when less invasive methods are unsuccessful.

Bronchospasm often responds to subcutaneous epinephrine, 0.3 mg, and this may be repeated twice at 10-minute intervals. The other usual

treatments for reactive airways can also be used, including inhalational and intravenous therapy with beta adrenergic agonists, xanthine derivatives and steroids. Atropine and ipratropium bromide have not been evaluated for use in this situation.

Hypotensive shock following an insect sting usually is due to massive vasodilation, and is one of the forms of distributive shock along with septic shock, spinal shock, etc., in which inadequate tissue perfusion occurs because of expansion of the vascular space. The treatment is with crystalloid IV fluid (saline or Ringer's lactate) and pressors. Epinephrine serves adequately as a pressor agent, and again is the first drug to use in view of its cross-coverage of the other major manifestations of anaphylaxis. A treatment often forgotten but very useful is the pneumatic antishock garment, also known as the MAST trousers (Military Anti-Shock Trousers). This provides an increase in peripheral vascular resistance in the lower half of the body, which results in shunting of blood flow to the central circulation, thus maintaining perfusion of the heart and brain. It also provides roughly 250 to 400 ml of autotransfusion of blood from the extremities and abdomen into the central circulation. These effects are promptly reversible with deflation of the garment.

Patient Instruction

When the reaction has been treated and the patient has recovered, the physician must instruct the patient about the risks and the prevention of future reactions. Generalized urticarial reactions and large local reactions indicate sensitization to the venom and the potential for a fatal reaction to the next exposure. Patients should be advised to wear shoes when outside, to avoid fruit trees when the fruit is ripe and falling, to minimize yard work in warm weather, and so on.

The patient should wear a medical alert tag. A self-administering epinephrine syringe should be prescribed (Epi-Pen® or Ana-Kit®), and the patient should keep one at home and one in the car glove compartment or the purse to be carried along on trips. The patient should use this if a generalized reaction occurs after a sting.

Finally, the patient should be referred to an allergist for the difficult decision about whether to initiate desensitization injections.

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Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

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Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

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Use the style of references seen in this *Journal*, which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*. Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus*.

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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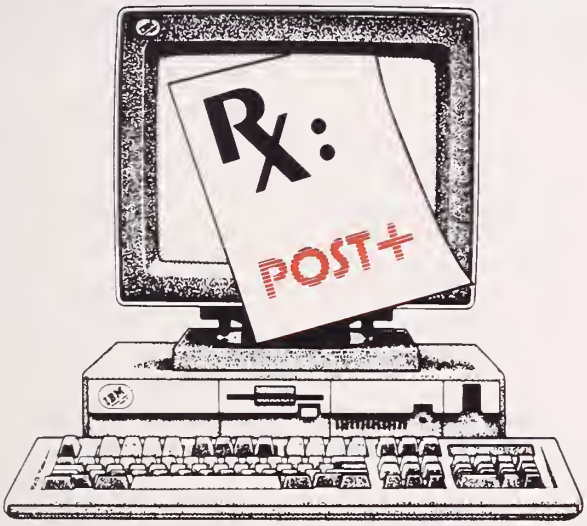

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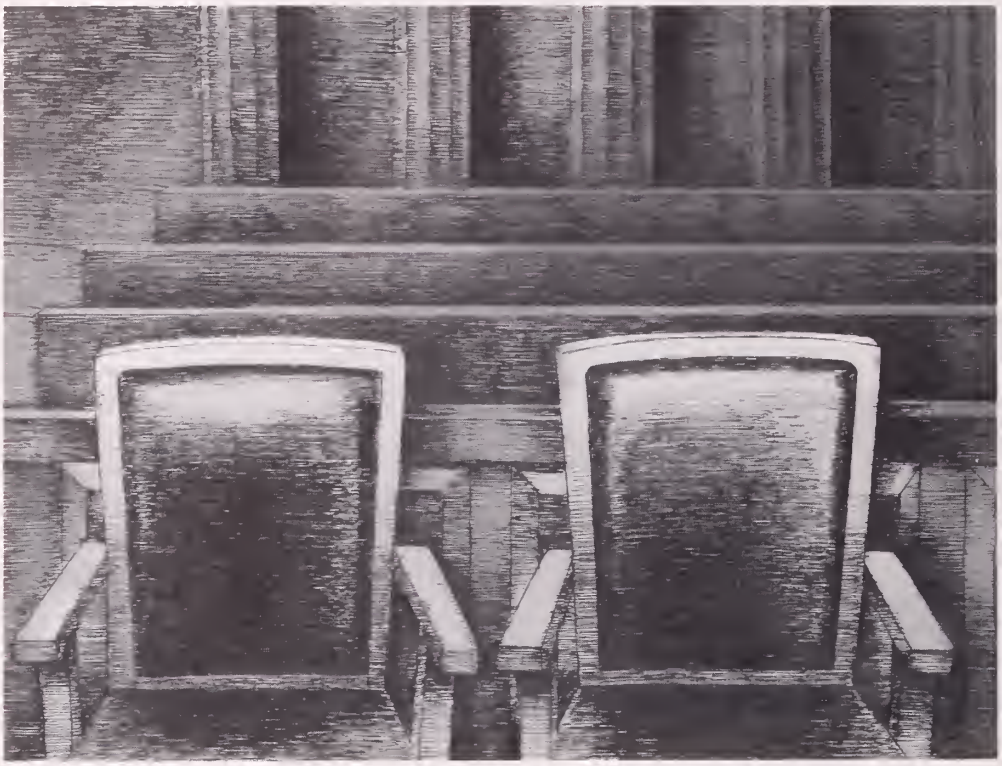

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President's Page

". . . we think that the bill, as it now stands, will leave autonomy to our physicians and yet maintain quality medical care in our state."

Bill Negotiated for Citizens

On March 20, the Omnibus Health Care Cost Containment Bill (*SB-576* and *HB-2707*) was introduced into the Legislature by the Public Employees Insurance Agency (PEIA) under the sponsorship of the Governor. This piece of legislation was one that the physicians of West Virginia rejected completely.

The original bill had five major objectives: 1) to combine the services of the PEIA, Workers' Compensation, Vocational Rehabilitation and Medicaid; 2) to allow the agencies to set rates unilaterally for these services; 3) to require mandatory participation in all state agency health services; 4) to require mandatory assignment in the state programs with no balance billing above the set payment; and 5) require mandatory assignment with no balance billing for all private insurances. The bill also included stiff civil and criminal penalties for non-compliance.

The West Virginia State Medical Association in cooperation with the West Virginia State Hospital Association worked very hard before an agreement on an acceptable bill was reached on Thursday, April 6. After many hours of deliberation and negotiation a break-through finally came. The legislation that was passed was not exactly what the State Administration wanted, but then it was not what WVSMA wanted either. It was a bill that we could accept and work with.

There are many who think that we should not have negotiated and just let the original bill pass; by doing so, they felt that many physicians would leave the state. We do not agree with this approach because the people who would have suffered the most would have been the citizens of West Virginia, the very people who look to us for medical care! Only time will tell, but we think that the bill, as it now stands, will leave autonomy to our physicians and yet maintain quality medical care in our state.

I would like to thank all the people who traveled to Charleston to make themselves seen and heard on this issue. This goes to prove that we can be an active political force when we exercise our right to stand up and be counted.

A special thanks goes to Mert Scholten, our Executive Director; to Dee Crabtree, our Manager of Government Relations; to Don Sensabaugh, our legal advisor and lobbyist, and to Melody Simpson, our legal counsel. They did a tremendous job. I cannot forget the outstanding work of our President Elect, Rick Latos; our Vice President, Mike Stump; our Councilor at Large, Skip Turner; our Council Chairman, Cordell De La Pena, and our Junior Councilor, David Z. Morgan. The tireless efforts of these people are ever so much appreciated.
—Bill M. Atkinson, M.D.

Enough

Enough, by God, is enough! It's time to call a halt to the foolish and trendy notion that medical charity can continue to be forcibly squeezed, ad finitum, from the body Medicine.

The squeeze has gone beyond thumb screws and similar devices applying coercive encouragement to other parts of the anatomy such as those employed by PROs, cost review authorities, HHS regulations and pre-admission certification programs of private insurers. What is left of the thus desiccated remains of the body Medicine is picked over by plaintiff attorney and insurance company vultures.

There is nothing left to share. And yet, like blue fish after a school of mullet, the hunt goes on for more of that juicy meat some still perceive in the medical system.

How did the ridiculous notion ever become extant that there is a group (doctors) willing, and thrilled, to devote their lives selflessly to the everlasting health and happiness of others without adequate compensation? It is just not so. There is no such group and the sooner this simple fact is recognized, the better it will be for the health of all of us.

Adequate compensation is a term, at least as it applies to physicians, that is not well understood. The term includes more than money.

Perhaps military men understand and appreciate the term more than most. In wars, in battle, medical personnel wear red cross arm bands and other similar identifying insignia which are understood by all combatants to demand, "Hold your fire! Don't shoot." They hold fire because each strongly suspects he could shortly be in need of medical services and they all know that no one can be paid enough to provide those services under fire. Our civilian system has yet to learn this lesson.

There is little dignity accruing to a life in Medicine anymore. There once was great dignity, some status, appreciable gratitude and great satisfaction. Now, all there is in the way of compensation is money. We have clerks with green eye shades, small-minded administrators, officious government flunkies, predatory lawyers, unprincipled politicians and yellow journalist commentators all gratuitously sharpshooting at us. Why shouldn't our services be expensive? Who would put up with the insults and the degradation except at a high price?

Of course, medical care is expensive. Yes, medical care has been consuming an increasingly higher percentage of the Gross National Product. It's true that the office visit which once cost two dollars now costs 30.

It is also true that when office visits cost two dollars, ice cream cones sold for five cents and a loaf of bread for 10 cents, and bananas were five cents a pound. Has anyone noticed, however, that ice cream cones and loaves of bread, if anything, are not quite as good as they were, and a banana is still just a banana?

Relative to what one gets for his money, Medicine is a fantastic bargain in comparison to any measurable commodity. We need make no apologies about that.

There lies a critical point. Our failure to respond to attack is tantamount to an apology. The ease with which we are led to modify our routines in order to fulfill the checklist demands of some intellectual dwarf is a form of moral cowardice. Any surrender to the seductive security of cookbook medicine is a disgrace and a shame.

Medicine has become a continuous hassle with a countless garrison of adversaries. It used to be that all we had to contend with was a grouchy nurse or two. Now, even they are as universally miserable as we. Who wants to spend his day, his week, his life quibbling with a swarm of annoying little tyrants thrilled with the knowledge that medical care funnels down to whatever tiny stream they elect to have pass across their desks.

Medicine once was enjoyable. That was back when all we had to contend with was disease. Now, the system is sick and the prognosis is that it will soon be moribund. Efficiency in our medical system soon will rival that of our postal system.

We have had enough of compromise, negotiation and diplomacy in our dealings with the threatening pack of wolves all about us. It's time to get *mean*. We need no smiling nice guys, out to make friends, to lead us. Diplomats have led us into a strip poker game wherein we now stand shivering, holding both hands over our genitals trying to protect what is left of our pride and decency.

We need leaders in medicine. We need a young Alexander. Someone to inspire us. To take the risks necessary to preserve and protect Medicine in the form and structure which has led it to the lofty but dangerous preeminence that tempts envious onlookers.—SDW

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Our Readers Speak

'Single-Win' Situation

In regard to "Caveney Health Care Voucher System" in the March, 1989, issue, I offer the following comments:

Mr. Caveney is "right on" in his suggestions of a voucher system to offer tax credits to physicians who accept Medicaid patients. This would definitely offer an incentive to physicians to accept Medicaid patients, offering these patients a wider choice of physicians.

However, Mr. Caveney shows remarkable lack of knowledge of the current system of reimbursement by Medicaid. We currently receive $10 per office visit no matter what the length or complexity of the visit and 30-35 per cent of what the state considers our "usual and customary rate" for surgical procedures. Therefore, the state already wins by paying such laughable fees at which most other professionals would sneer. However, the patient, limited to a choice of physicians who accept Medicaid assignments, and the physicians, who accept these patients who often are much higher risk than our usual patient population, are losers in Mr. Caveney's "triple-win situation".

I applaud Mr. Caveney for his thought-provoking approach and his concern not only for the physician but also for the indigent patient.

The problem lies in providing the incentive for the State of West Virginia as a health care provider to make the changes to convert a "single-win" to a "triple-win" situation. How? Perhaps by inundating our legislators with copies of Mr. Caveney's article?

Douglas E. McKinney, M.D.
11 Chenoweth Drive, Suite B
Bridgeport, WV 26330

UCR, Medicaid Fees Not Mentioned

Editor's Note: Following is Scott Caveney's reply to Doctor McKinney's letter above.

First, as a teenager, I want to thank Doctor McKinney for reading and responding to my essay. This paper received widespread readership as evidenced by: "You are to be commended for your insight into the health care field, and your idea for a tax-deductible voucher system is a unique approach to the problems currently faced by both doctors and patients in obtaining and providing health care services."—Senator Robert Byrd.

Similar comments were received from Senator Jay Rockefeller, Congressman Alan Mollohan, several M.D.s throughout West Virginia, a medical school dean, stockbroker, and a foundation president. The editorial was picked up by the *West Virginia Dental Journal* and published in the *Wheeling News-Register* as a reprint from the *W.V.M.J.*

Nowhere did I mention lower U.C.R. or lower Medicaid fees in the voucher system. My voucher system would be credited at the current fee scale, not a "laughable fee" as mentioned by Doctor McKinney. The paper says that if a medical operation is currently provided for a fee of $1,000, that amount will be applied as a tax credit on the individual doctor's tax return. (I never mentioned 30-35 per cent of U.C.R. as Doctor McKinney discussed).

Recently it was reported that 300,000 citizens of the state have no medical insurance coverage. By indigent, I also meant those patients with no insurance coverage such as a stock boy, a waitress, etc., working for minimum wage and yet not on welfare. Those are patients whom you currently treat and from whom you never receive any compensation.

Doctor McKinney's comments about the legislators are very timely, especially with Senate Bill 576 and House Bill 2707 in the current West Virginia Legislature potentially changing all of our lives. Citizens and physicians, in particular, have to get more involved in the ongoing legislative process and be more proactive as contrasted to the reactive approach to this 69th session.

Scott Caveney
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2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

WVSMA Annual Meeting

Lawmaker, Duke University Neuroradiologist to Talk

"The Doctor and the Politician" will be the title of an address to be given by a Michigan state senator during the 1989 WVSMA Annual Meeting.

The Honorable William A. Sederburg, Chairman of the Michigan Senate Health Policy Committee, will speak during the opening session of the 122nd Annual Meeting Thursday morning, August 17.

The convention will be held August 16-20 at the Greenbrier, beginning Wednesday afternoon, August 16, with the opening session of the House of Delegates.

A Duke University Medical Center professor, it also was announced by the Program Committee, will speak on "Magnetic Resonance Imaging of the Brain and Spine" during the Saturday morning scientific session. He is E. Ralph Heinz, M.D., Professor and Chief, Neuroradiology Section, Department of Radiology, at Duke.

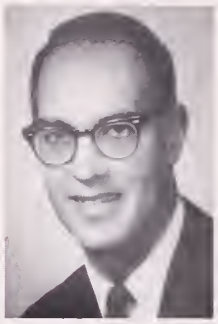
Other discussion subjects during the scientific sessions scheduled Thursday and Friday as well as Saturday mornings will be Lyme disease, external influences on practice, the 'tight building' syndrome, gastritis and peptic ulcer disease, and disease prevention.

Senator Since 1979

Bill Sederburg, of East Lansing, has served in the Michigan Senate since 1979. He served previously as a member and Secretary of the State Board of Education.

Senator Sederberg holds an M.A. degree in political science and a Ph.D. in political science/public administration from Michigan State University. He has taught numerous

Sederburg



Heinz

courses in public administration, state government, and technology in government at Michigan State and Albion and Alma colleges.

Senator Sederburg, who has been on the board of trustees of the Michigan Lung Association and the Michigan Multiple Sclerosis Society, presently serves on the Senate Appropriations Committee.

He is the organizer of three Mindpower Conferences, each of which involved over 300 people interested in addressing education issues in Michigan.

Because of his expertise in computer technology, the National Conference of State Legislatures frequently has invited him to participate and chair panels which discuss the use of computers in the Legislature.

The Senator has received more than 40 awards for outstanding legislative achievement from the American Cancer Society, American Lung Association and a number of Michigan groups.

State Native

Doctor Heinz, a native of West Virginia, was Allstate Basketball Center from South Charleston High School in 1947, and received the school's American Legion Scholarship Award.

He was graduated from West Virginia University where he played basketball and was a member of Mountain and Sphinx, senior mens honorary groups.

Doctor Heinz played professional basketball and attended the University of Pennsylvania Medical School where he was class President and Vice President of the Undergraduate Medical Association. After graduation in 1955, he interned at Philadelphia General Hospital and completed residencies and postgraduate work there and at USPHS Hospital in Chicago, the University of Chicago, and Neurological Institute at Columbia University in surgery, internal medicine, radiology and neuroradiology.

He has been on the teaching staff at Duke since 1978, and also has held teaching posts at Emory University, Yale University and the University of Pittsburgh. At the time he became Chairman of the Department of Radiology at Pittsburgh he was the youngest such department chairman at a major university.

Doctor Heinz, who was voted "Best Teacher" in the Department of Radiology at Duke in 1988, is author of the textbook, *Neuroradiology,* published in 1984. He also is the author or co-author of more than 120 scientific papers.

Convention Schedule

In addition to the opening House session Wednesday and the three

morning scientific sessions, the convention schedule will include a keynote address Thursday morning, section and specialty society meetings primarily on Friday, and the second House session Saturday afternoon. A presentation on computer diagnostics is being planned for Friday afternoon. Social and other convention activities will be announced.

Rufus K. Broadaway, M.D., of Miami, Florida, as announced previously, will address the first session of the House. An AMA trustee, Doctor Broadaway is Senior Vice President of Medical Affairs at Cedars Medical Center in Miami. He'll be speaking in the place of the current AMA President Elect, Alan R. Nelson, M.D., who will be out of the country at that time. Doctor Nelson will be installed as AMA President in June.

Other speakers and topics announced earlier are:

Friday: "Lyme Disease: The Latest Great Imitator," Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, WVU Health Sciences Center, Morgantown; "External Influences on the Practice of Medicine," Robert W. Cantrell, M.D., Fitzhugh Professor and Chairman, Department of Otolaryngology-Head and Neck Surgery, University of Virginia; and "Allergy-Free, Non-Toxic Environment: The Effect of the Built Environment on Our Health," Robert J. Kobet, AIA, Butler Pennsylvania.

Members of the 1989 Annual Meeting Program Committee are Drs. Michael J. Lewis, Morgantown, Chairman; James L. Bryant, Clarksburg; C. Richard Daniel, Beckley; Derrick L. Latos, Wheeling; Michael A. Morehead, Parkersburg; Maurice A. Mufson, Huntington, and Stephen L. Sebert, Lewisburg.

Capitol Events

Constant physician presence at the state Capitol was required in late March and early April as they and other health care providers teamed up in a lobbying effort against health care cost containment legislation, SB-576 and HB-2707, with the result being a new bill negotiated with the Caperton administration (see Page 194 and WESGRAM, April 10 and April 25). Preparing for a House committee hearing on the original bill March 24 are, from left, Drs. F. Thomas Sporck, Charleston; Derrick L. Latos, Wheeling, WVSMA President Elect; Michael M. Stump, Elkins, Vice President; David Z. Morgan, Morgantown, Junior Councilor, and Prasadarao B. Mukkamala, Charleston.

Pete Johnson, Director of Human Services, The Wheeling Clinic, left; WVSMA President Bill M. Atkinson, M.D, center, and David W. Avery, M.D., Vienna, discuss strategy during a rally of physicians and health care providers at the Capitol April 6.

Alar-Apple Cancer Claim Rejected in 1985, HHS Says

Editor's Note: Below is a statement received in March from the U.S. Department of Health and Human Services.

The following statement is being issued jointly by Frank E. Young, M.D., Ph.D., Commissioner of the Food and Drug Administration; Dr. John Moore, Acting Deputy Administrator, Environmental Protection Agency, and John Bode, Assistant Secretary for Food and Consumer Services, U.S. Department of Agriculture:

In the last few weeks there has been a growing public controversy over the potential harmful effects of a chemical called Alar, which is used by apple growers to retain the crispness of their fruit as it goes to market. It is used primarily in the growing of Delicious, Staymen and McIntosh apples.

The federal government believes that it is safe for Americans to eat apples, and the responsible federal agencies are working together to reassure the public of this fact.

Board Rejects Claim

Recently, the Natural Resources Defense Council has claimed that children face a massive public health problem from pesticide residues in food. Data used by the NRDC, which claims cancer risks from Alar are 100 times higher than Environmental Protection Agency estimates, were rejected in 1985 by an independent scientific advisory board created by Congress. Alar has been used for decades in apple growing, and it has been the subject of many studies on possible harmful side effects.

A recent progress report on preliminary results from an ongoing study shows that a breakdown product of Alar caused certain kinds of tumors in mice. Based on this report, EPA has begun the process to phase out Alar in apple growing if the final data, which will be independently reviewed, demonstrate a need for cancellation. Cancellation could then occur by July, 1990.

EPA believes the potential risk from Alar is not of sufficient certainty and magnitude to require immediate suspension of the use of this chemical. EPA and others have pointed to lack of scientific validity in the suggestion by the NRDC that the risk is much greater than has been stated by EPA.

No Health Risk Posed

The Food and Drug Administration of the Department of Health and Human Services, the agency responsible for monitoring pesticide residues in food, has found either no residues or residues that are far below EPA's tolerance. Both FDA and EPA believe that Alar use over this interim period is safe and does not pose a health risk to the American public. Available data show overwhelmingly that apples carry very small amounts of Alar. In addition, its use has decreased dramatically over the past several years; estimates are that 95 per cent of the apple crop was not treated in 1988.

It should also be noted that risk estimates for Alar and other pesticides based on animal testing are rough and are not precise predictions of human disease. Because of conservative assumptions used by EPA, actual risks may be lower or even zero.

No Imminent Hazard

The FDA, EPA and U.S. Department of Agriculture believe there is not an imminent hazard posed to children in the consumption of apples at this time, despite claims to the contrary.

Therefore, the federal government encourages school systems and others responsible for the diets of children to continue to serve apples and other nutritious fruit to American children.

This is an issue that will continue to be monitored closely . . .

Penn State Forms Nuclear Waste Group

Appalachian Compact Users of Radioactive Isotopes, an organization for the advancement of safe and effective disposal of low-level radioactive waste in the Appalachian Compact States, has been formed by the Environmental Resources Research Institute at Penn State.

The Appalachian Compact consists of Delaware, Maryland, Pennsylvania and West Virginia and was formed under 1980s regulations directing states to take responsibility for low-level radioactive waste generated within their borders. Pennsylvania is the host state for this compact and will have the LLRW disposal site within its borders.

Forum for Users

ACURI will provide a forum for radioactive isotope users and will gather, analyze and disseminate information on laws, rules and regulations, siting development, and the public perception of waste facilities and radioactive waste.

"All licensees and permit holders should be concerned about LLRW issues whether they directly or indirectly generate waste," said John R. Vincenti, ACURI Program Director and Program Specialist, Department of Nuclear Engineering, Penn State.

ACURI is intended for groups or individuals who own or work with radioactive isotopes or materials in the four states.

Funding

Initial funding of ACURI came from Dusquesne Light Company, GPU Nuclear Corporation, Pennsylvania Power and Light Company, Baltimore Gas and Electric Company, and Philadelphia Electric. Maintenance funding will come from member dues payments.

For further information contact John Vincenti, 321 Sackett Building, University Park, PA 16802, 1-800-321-6789 or (814) 863-2133.

Wilderness Seminar Planned in June

A Wilderness Medicine Seminar will be held June 9-11 (in Charleston Friday and Saturday, June 9-10), featuring a New River whitewater raft trip on Sunday, June 11.

The Charleston seminar will be held at the Charleston House Holiday Inn under the sponsorship of the American College of Emergency Physicians, West Virginia Chapter; Emergency Management Specialists, Inc.; Department of Emergency Medicine, Charleston Area Medical Center, and HealthNet.

Speakers and topics on Saturday will be "Emergency Care of Fractures and Dislocations," Robert L. Kalb, M.D., Clinical Assistant Professor of Orthopedics, The Medical College of Ohio at Toledo; "Splinting and Casting Workshop," Doctor Kalb; "Stinging Insect Allergy," Robert Walker, M.D., Chairman, Department of Family Practice and Community Medicine, Marshall University School of Medicine; "The Toxicology of Poisonous Plants and Mushrooms," G. Richard Braen, M.D., Director, Emergency Department, Brigham and Women's Hospital/Harvard Community Health Plan, Boston;

"Tropical Medicine," John Walden, M.D., Associate Chairman, MU Department of Family Practice and Community Medicine; "Spinal Trauma: Mechanisms, Immobilization and Initial Treatment," Philip Mayer, M.D., Chief of Spine Surgery and Associate Professor of Spine Surgery, Department of Orthopedic Surgery, West Virginia University Health Sciences Center, Morgantown; "Intra-Abdominal Trauma," Anthony Udekwu, M.D., Associate Professor of Medicine, Assistant Director Trauma Unit, University of Pittsburgh; and "Wilderness Rescue," William Ramsey, M.D., WVU Department of Emergency Medicine.

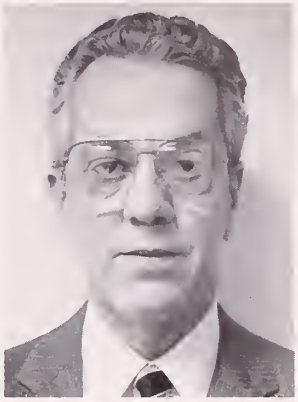
Accreditation

The program has been reviewed and is acceptable for 10 prescribed credit hours by the American Academy of Family Physicians and the American Medical Association Physician's Recognition Award. It also is approved by the American College of Emergency Physicians for 10 hours of ACEP Category 1 credit, and also for 10 hours CAT D2 of the American Osteopathic Association.

For registration and additional information, contact Jack Tolliver, M.D., Department of Emergency Medicine, Charleston Area Medical Center, 3200 MacCorkle Avenue, S.E., Phone (304) 348-9015.

Health care workers rally against cost containment legislation, SB-576 and HB-2707, at the Capitol in Charleston April 1.

Deputy Executive Director Employed



George Rider

George Rider, a former Parkersburg hospital official, has been named WVSMA Deputy Executive Director, effective April 1.

Rider, 55, a Fairmont native, fills a new position with WVSMA.

"We're happy to have him with us as Deputy Executive Director," said WVSMA Pesident Bill M. Atkinson, M.D. "He will be working with Mert Scholten (Executive Director) to facilitate activities, particularly in the areas of office management and PPO."

Rider served as Executive Vice President and Chief Operating Officer at St. Joseph's Hospital in Parkersburg, a position he had held since 1986. He joined the hospital staff in 1980.

He also was a consultant in health care planning and management in Alexandria, Virginia, a director of business development and medical planner in Washington, DC, and held a variety of hospital and health care administrative posts with the U.S. Air Force during a 20-year career ending in 1976.

The new Deputy Executive Director is a graduate of Fairmont State College, and received an M.B.A. degree in health care administration fom George Washington University in Washington, D.C.

He and his wife, Dot, also a Fairmont native, are the parents of one daughter, Mrs. Cathy Culhane, a Charleston attorney.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

May 5-6, Medical Management of Respirator Use

CAMC/West Virginia University Charleston Division

May 5, Infectious Diseases

May 10, Current Concepts in Total Parenteral Nutrition.

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—May 25 (tba)

Brownsville, PA, ★ General Hospital, 11 A.M.—May 4, Newer Concepts in CPR, Charles Whiteman, M.D.

May 25, Gastrointestinal Endoscopy —When is it Indicated? Ronald D. Gaskins, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—May 11 (tba)

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—May 17, Acute Rheumatic Fever, Melanie Fisher, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—May 2, Pediatric Neurology, Charles Gay, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—May 3, UTIs in the Geriatric Patient, Joseph Plymale, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—May (no program)

Logan, • General Hospital, 11:30 A.M.—May (no program)

Madison, ☐ Boone Memorial Hospital, 7 P.M.—May 9, Principles of Skilled Care, Sally Llewellyn, M.S.W.

Man, • Appalachian Regional Hospital, 7 P.M.—May 16, Pulmonary Update, George Zaldivar, M.D.

Martinsburg, ★ V.A. Medical Center, 2 P.M.—May 5, Geriatric Assessment: What's the Point, David Z. Morgan, M.D.

Montgomery, • General Hospital, 12 P.M.—May 3, Using Lasers in Surgery, Romeo Lim, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—May 11, Vasculitis, Gregory A. Kujala, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—May 11, Chemotherapy Update, Steven Jubelirer, M.D.

Parkersburg, ★ Camden-Clark Hospital 7 A.M.—May 10, Surfactant Therapy for Respiratory Distress Syndrome, Martha Mullett, M.D.

May 24, The Use of Clot-Dissolving Enzymes After a Heart Attack: When, Why and How? Abnash Jain, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—May 12, Update on Cardiac Bypass Management, Steve Lewis, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—May 18, Update on Substance Abuse, Mark Stephens, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—may 16 (program tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—May 2, Acute Upper Airway Obstruction, Mahendra Patel, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—May 9, Infections Associated With IVs and Catheters, Melanie Fisher, M.D.

Weston, ★ Stonewall Jackson Hospital, 6:30 P.M.—May 16, Hypertensive Emergencies, Kevin Halbritter, M.D.*

*tentative

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—May 24, Outpatient Drug Withdrawal Guidelines, T.D. Dickey, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—May 16, Back Pain, Mario Battigelli, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—May 18 (tba)

Poetry Corner

Alzheimers

Don't pity me.
I hate to see the pity in your eyes.
You think I'm not as wise
As I used to be,

But you are wrong.
I admit to occasional lapses
In memory, but my brain's synapses
Are still strong,

Just badly jumbled.
Memories of the past
Stand clear and fast,
Just the recent ones are crumbled.

So I live in the past
I cannot explain to you,
And when I try to,
You laugh.

But I like that.
Laughter in your eyes is far more pretty
Than tears or pity,
When it comes to that.

No, don't pity me
Because I can't communicate.
Be happy, with me, that fate
Has let me live, if only in by-gone days.

Robert L. Smith, M.D.
Morgantown

The Fantasy of Rescue

like accountants or waitresses
we doctors choose to serve
our patients but we are not
responsible we are responsible
to ourselves and for our
families like artists

we heard the songs like buffalo
springfield change the world
while we studied and were
sublimating
our own singing we had to pass
the test so we sang this song
help other people

in all the anguished midnights
away from our friends and alone
with our sins we cried Abba
Father while our brothers and
sisters made love and died like gods

now we wear crisp white shirts
and recognize the fantasy of rescue
as the burden of salvation we must
bear with good humor for the
social workers and the nurses
who struggle with our poetry

Charles R. Joy, M.D.
Erie, Pennsylvania

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

EENT Diseases, Charleston Seminar

A comprehensive review of eye, ear, nose and throat disease and surgery for the primary care physician is scheduled June 2-3 at the Charleston Marriott.

Sponsored by The Eye and Ear Clinic of Charleston, Inc. and the Department of Family Practice, West Virginia University Health Sciences Center, Charleston Division, the seminar covers common head and neck conditions.

Further Information on the seminar is available by contacting R. Austin Wallace, M.D., Seminar Director, at 343-4371 or 1-800-642-4049 (WV).

Medical Meetings

May

5-6—WV Affiliate, Am. Diabetes Assoc., Parkersburg

7-12—Am. Roentgen Ray Society, New Orleans.

8—Am. Assoc. for Thoracic Surgery, Boston.

10—WVSMA Loss Control Seminar, Office Personnel, Beckley.

11-14—Am. Geriatrics Society & Am. Federation for Aging Research Annual Meeting (46th), Boston.

13-19—Am. Society for Gastrointestinal Endoscopy, Washington, DC.

14-17—Am. Trauma Society, Arlington, VA.

14-17—Am. Thoracic Society, Cincinnati.

16-17—Society for Surgery of the Alimentary Tract, Washington, DC.

17-19—Am. Trauma Society, Washington, DC.

17-21—Am. Society of Head & Neck Radiology, Toronto.

21-23—Am. Society of Clinical Oncology, San Francisco.

June

9-11—Wilderness Medicine Seminar (Am. College of Emergency Physicians, WV Chapter), Charleston.

18-22—AMA Annual Meeting, Chicago.

18-22—International Conference on Preventive Cardiology (2nd), Washington, DC.

20-21—Society of Vascular Surgery, New York.

22-25—Am. Academy of Pediatrics, Sea Island, GA.

July

16-22—10th World Medicine Games, Montreal.

August

16-20—122nd Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

This space contributed as a public service.

"YES, THERE IS LIFE AFTER BREAST CANCER. AND THAT'S THE WHOLE POINT."

–Ann Jillian

A lot of women are so afraid of breast cancer they don't want to hear about it.

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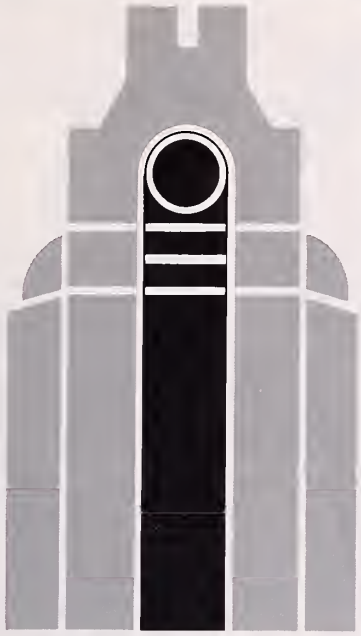

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Michael Sorkin, M.D.

New Nephrology Chief Plans Program

Michael Sorkin of Pittsburgh has been appointed Section Chief of Nephrology at WVU Health Sciences Center.

Doctor Sorkin, who joined WVU February 1, formerly served as Associate Professor of Medicine and Director of the Peritoneal Dialysis Program at the University of Pittsburgh.

He also served as Associate Chief of the Renal Section at the VA Medical Center in Oakland.

As Chief of Nephrology, Doctor Sorkin plans to enact a fellowship program for the department to develop a close working relationship with the dialysis unit.

"I'm really impressed by the potential for growth in the Department of Medicine and the Renal Section," said Doctor Sorkin.

He also plans to expand the department's research programs, adding his own peritoneal dialysis research.

Doctor Sorkin has been involved in the clinical testing of continuous ambulatory peritoneal dialysis.

In this type of kidney dialysis, the patient's own system is used as a dialysis service.

Doctor Sorkin explained that with peritoneal dialysis the patient is not required to come into the hospital three times a week for machine dialysis.

"By utilizing the patient's own body, we're able to provide continuous dialysis. It also provides excellent blood pressure control and removal of waste products," said Doctor Sorkin.

Doctor Sorkin received his bachelor's degree from Northwestern University, Evanston, Illinois, in 1962 and his M.D. degree from Northwestern University Medical School, Chicago, in 1966.

He served as a flight surgeon in the Air Force from 1967-69 after completing his internship at St. Mary's Hospital, San Francisco.

Doctor Sorkin completed his residency at Northwestern University Medical Center and received a fellowship to study nephrology at the University of California, San Francisco, and the University of Texas Health Sciences Center, San Antonio.

He also formerly served as Assistant Professor of Medicine and Director of Continuous Ambulatory Peritoneal Dialysis at the University of Missouri.

Moss One of Three In Ethics Course

Alvin H. Moss, Chair of WVU Hospitals' Ethics Committee, is one of three physicians selected nationwide to study medical ethics for one year at the University of Chicago.

When Doctor Moss returns from Chicago, he will direct a comprehensive new ethics program at WVU, including the Schools of Medicine, Dentistry, Nursing and Pharmacy.

The University of Chicago's National Leadership Training Program in Clinical Medical Ethics is one of only a few centers in the country that trains physicians to direct medical ethics teaching programs.

Doctor Moss explained that clinical medical ethics is a practical discipline whose central purpose is to improve the quality of patient care. Resolving issues dealing with end-of-life care, health care costs, patient autonomy and medical-legal interactions often is key to successful patient care.

Doctor Moss conducts research in cardiopulmonary resuscitation. He has looked at the risks and benefits of this procedure for patients with a variety of chronic illnesses.

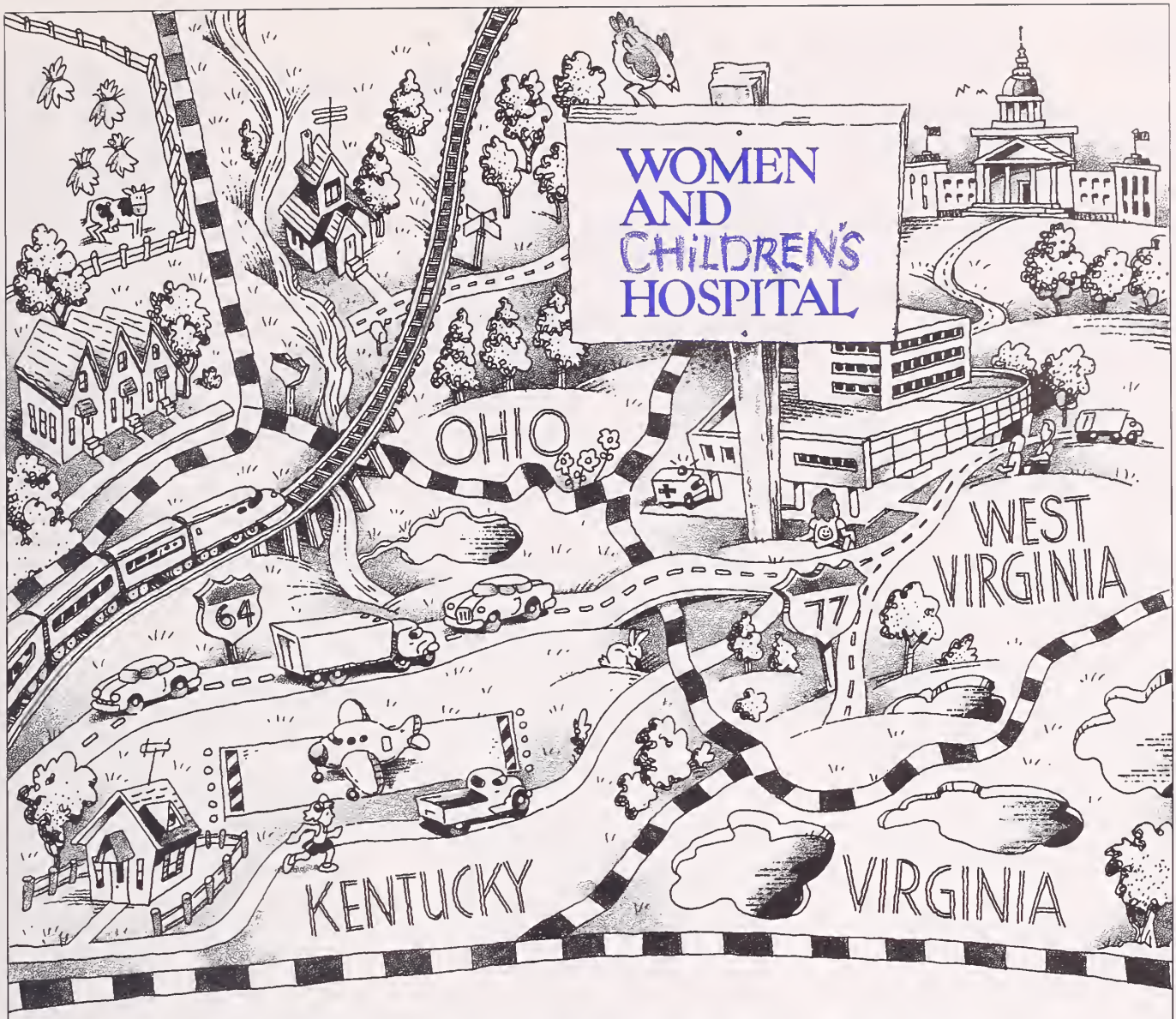
He became interested in medical ethics questions through his specialty in nephrology where difficult questions often arise involving patients who need dialysis treatments or kidney transplants.

Began to Ask Questions

"As I have cared for progressively older and sicker dialysis patients, I have begun to ask questions about the care I am providing—questions such as when is it right to stop dialysis in irreversibly comatose patients, and whether patients really understand the procedures they are being asked to consent to," Doctor Moss said.

A member of WVU's ethics teaching program since 1984, Doctor Moss was instrumental in establishing WVUH's Ethics Committee, and has chaired it since its inception in July, 1985.

He also organized the West Virginia Network of Hospital Ethics Committees which held its second annual symposium April 12 at WVU on Ethical Issues in the Health Care of the Elderly.



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CAMC

Women and Children's Hospital

Division of Charleston Area Medical Center

MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

Huntington State Hospital Approved

Huntington State Hospital, which has been affiliated with the School of Medicine since the school's inception, has become the first psychiatric facility owned and operated by the state to earn accreditation from the Joint Commission on the Accreditation of Healthcare Organizations.

The accreditation has very positive ramifications for the hospital, the medical school and the state, according to Dr. Johnnie Gallemore. Doctor Gallemore, Chairman of Psychiatry and Associate Dean for Academic Affairs, also is a voting member of the Huntington State Hospital Governing Board.

"The value to the area is obvious, both in the upgrading of care for patients that the accreditation reflects and in the economic value provided through third-party reimbursements," he said. "The accreditation also makes it possible for psychiatry residents to train there, which probably is the biggest factor to our Psychiatry Department."

Opens Door

The hospital already serves as an important educational site for the School of Medicine, he said, with all students working at least four weeks there. The accreditation opens the door to greater interaction with Marshall University as a whole because trainees in other fields such as nursing and psychology now will be able to practice there.

The Department of Health contracted with the Department of Psychiatry to help the hospital develop a state-of-the-art clinical management system which would gain accreditation, according to Marshall's Elizabeth Devereaux, who headed up the project. "I've never seen any group work harder," she said of the Huntington State personnel.

Apart from this contract, the school and the hospital cooperate in numerous ways. Both the hospital's Clinical Director, Dr. Roy Edwards, and its Associate Clinical Director, Dr. Mildred Bateman, are members of Marshall's psychiatry faculty. Marshall provides the psychiatric services for one of the hospital's three units, and various Marshall departments also contract with the hospital to provide medical care, psychological services and occupational therapy. The hospital and school cooperate in recruiting.

Doctor Gallemore said the JCAHO site visitors commented favorably on the liaison between the school and the hospital. "They said that they felt that the 'courtship' with the Medical School was a key factor in accreditation, and that they were looking forward to the 'marriage.'

"We feel that Marshall gains a great deal from its association with Huntington State, and we're glad that we provide benefits in return," he said. "Our relationship is a very solid one, and the overriding sentiment is to work together and get things accomplished."

Two MU Spokesmen Invited to Meeting

Two representatives of MU School of Medicine have been invited to make presentations to groups of the American Academy of Family Physicians.

Robert B. Walker, M.D., Chairman of the Department of Family and Community Health, is one of three people the AAFP asked to meet April 21 in Kansas City, Missouri, with a subsection of its Board of Directors.

"This group wants to make sure the AAFP is doing enough for rural health," Doctor Walker said. "We've been asked to make a presentation on what academic medicine could and should do for rural health."

David Adair, a third-year medical student, has been asked to make two presentations to the national conference of family practice residents and AAFP student members in August. Adair, who was appointed a member of the national Membership and Member Service Committee in December, is a past President of Marshall's Family Practice Club.

Club Projects

He has been asked to describe the MU Family Practice Club's innovative community service and recruitment projects which have made it the only one in the nation with 100-per cent membership. The club has a cholesterol screening program which it has conducted in places such as malls and coal mines. Other clubs have since begun to pick up on the concept. In addition, the club has developed a recruitment video describing its activities.

Doctor Walker said he was pleased with the invitations. "It just reminds me that Marshall more and more is being seen nationally as a true leader in rural health," he said.

Last year, Marshall's Combined Residency/Practice Program was honored by the National Rural Health Association as the nation's outstanding rural health program. In recent months, Doctor Walker was one of 20 rural health care experts appointed to an advisory panel for the U.S. Congress' Office of Technology Assessment, and Gregory Wagner, M.D., was appointed to the Mine Health Research Advisory Committee of the Centers for Disease Control. This month, Marshall is beginning to see patients in a ground-breaking rural geriatrics program.

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R. W. Hibbard, M. D. 525-9355
D. H. Webb, M. D. 525-9355
L. C. Smith, M. D. 522-4422
M. M. Bateman, M. D. 526-0580

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Pathology:
Fulvio Franyutti, M. D.

Surgery:
J. W. Woodford, M. D.
Boyd R. Wickizer, M. D.

Internal Medicine:
Karl J. Myers, Jr., M. D.

Pediatrics:
E. G. Kreider, M. D.

Family Practice:
Charles L. Arnett, M. D.
James A. Arnett, M. D.

JAMES T. SPENCER, JR., M.D.
ROGER P. NICHOLS, M.D.
RONALD L. WILKINSON, M.D., F.A.C.S.
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New Members

The following members were welcomed in March as new members of the West Virginia State Medical Association:

Cabell
Hosey Gabriel, M.D.
2828 First Avenue Suite 301
Huntington, WV 25702

Leon McGahee, M.D.
MU School of Medicine
Huntington, WV 25701

Greenbrier
Verna E. Hanes, M.D.
Greenbrier Physicians, Inc.
200 Maplewood Avenue—Fairlea
Ronceverte, WV 24970

Zainab Shamma-Othman, M.D.
Greenbrier Physicians,Inc.
200 Maplewood Avenue—Fairlea
Ronceverte, WV 24970

Jeffrey Zervas, M.D.
Greenbrier Physicians, Inc.
200 Maplewood Avenue—Fairlea
Ronceverte, WV 24970

Harrison
Dana E. Bragg, M.D.
4 Hospital Plaza Suite 103
Clarksburg, WV 26301

Kanawha
James J. Pettit, Jr., M.D.
3100 MacCorkle Avenue, S.E. #309
Charleston, WV 25304

Logan
Sohalia Mojadaddi, M.D.
600 East MacDonald Avenue
Man, WV 25635

Plaridal P. Tordilla, M.D.
600 East MacDonald Avenue
Man, WV 25635

Marshall
Ashraf Badour, M.D.
1000 Wheeling Avenue
Glen Dale, WV 26038

Mingo
Jack Lipps, M.D.
Box 570
Williamson, WV 25661

Monongalia
Kim B. Carey, M.D.
1197 Van Voorhis Road
Morgantown, WV 26505

Rita Kay Payne, M.D.
WVU Medical Center
Dept. of OB/GYN
Morgantown, WV 26506

Mark J. Polak, M.D.
WVU Medical Center
Dept. of Pediatrics
Morgantown, WV 26506

Scott E. Pollard, M.D.
WVU Medical Center
Dept. of Behavioral Medicine
Morgantown, WV 26506

Michael I. Sorkin, M.D.
WVU Medical Center
Dept. of Nephrology
Morgantown, WV 26506

Ohio
Aaron H. Gootman, M.D.
11 Elmwood Place
Wheeling, WV 26003

Ellen L. Kitts, M.D.
Watson Rehab. Hospital
Camp Meeting Road
Sweickley, PA 15143

David H. Liebeskind, M.D
51 Shawnee Hills
Wheeling, WV 26003

Patrick J. Parks, Jr., M.D.
26 Fieldcrest Drive
Wheeling, WV 26003

Raleigh
Velayudhan Sadadevan, M.D.
P. O. Box 2286
Beckley, WV 25801

Margaret A. Staggers, M.D.
Beckley Hospital
1007 South Oakwood Avenue
Beckley, WV 25801

South Branch Valley
Anil K. Makani, M.D.
P. O. Box 788
Petersburg, WV 26847

John King Seegar, III, M.D.
P. O. Box 839
Franklin, WV 26807

Residents
Rebecca Sparks Case, M.D.
3000 Staunton Avenue, S.E.
Apartment 32
Charleston, WV 25304

Kevin S. Kreisler, M.D.
1240 Valley View Avenue
Apartment A
Morgantown, WV 26505

Students
Kevin R. Holbert
106 Wedgewood Drive 9
Morgantown, WV 26505

Obituary

GEORGE W. EASLEY, M.D.

Dr. George W. Easley of Morgantown, who retired as Chief of Staff at the Louis A. Johnson Veterans Administration Medical Center in Clarksburg in 1977, died February 19 in a Morgantown hospital. He was 84.

Doctor Easley, a native of Bluefield, practiced in Williamson from 1927 through 1957. He was an honorary member and former Secretary of the Harrison County Medical Society.

He was graduated from the University of Richmond, and received his M.D. degree in 1928 from the Medical College of Virginia. He interned at Williamson Memorial Hospital and completed additional graduate work in surgery in Chicago.

Doctor Easley also was an honorary member of the West Virginia State Medical Association and American Medical Association, and a member of the American College of Surgeons and the International College of Surgeons.

Survivors include the wife, Mrs. Isabel S. Easley; one son, George W. Easley, Jr., Anchorage, Alaska; four daughters, Mrs. Ed Barton, Sherman, Texas; Mrs. Sue Chandler, Baton Rouge, Louisiana; Mrs. Dixon Nothcutt, Brentwood, Tennessee, and Mrs. Phil Masenheimer, Federal Way, Washington; one brother, Dr. George Easley, Danville, Virginia; and one sister, Mrs. Susan Early, Charleston.

WESPAC Members

Listed below are additional 1989 WESPAC members reported to the Journal since the listing published in the April issue. New WESPAC members will be reported next month.

Physicians

Cabell
Deleno H. Webb III

Greenbrier Valley
Robert K. Modlin
*Stephen L. Sebert
Stephan Thilen

Kanawha
*W. Alva Deardorff
*Thomas R. Douglass
Muhib S. Tarakji
John W. Vaughan

Logan
Kriengkrai Kitiphongspattana
Chanchai Tivitmahaisoon

Marshall
M. F. Anwar

Mercer
Gunther H. Frey
*Edward M. Spencer

Ohio
Thomas Przybysz
Robert R. Weiler

Parkersburg Academy
Harry L. Amsbary
Benjamin J. Sol

Raleigh
*Raquel S. Israel

Tygart's Valley
*Michael M. Stump

Wetzel
Donald A. Blum

Auxiliary

Eastern Panhandle
*Virginia S. Reisenweber

Mercer
*Lois J. Spencer

Parkersburg
Myla J. Amsbary

*Sustainer Member

County Societies

McDOWELL

The McDowell County Medical Society met March 1 in Welch at the Bonanza. The speaker was Alan Rosenbloom, M.D., whose talk was on Type II diabetes.

Donations were approved for the Humane Society, Project Graduation, and the AMA Education and Research Foundation.--Jeffrey P. Palmer, M.D., Secretary.

MONONGALIA

Robert M. D'Alesandri, M.D., Dean of the West Virginia University School of Medicine, was the speaker for the meeting of the Monongalia County Medical Society February 7. His subject was the physician and the community.

A motion to change quorum requirements was approved unanimously

The Society met again March 7.

David Fogarty, M.D., of Morgantown was the speaker on Plastic Surgery in the Third World.--Robert L. Murphy, Executive Secretary.

WESTERN

Ronald C. Michels, Parkersburg endocrinologist, was guest speaker for the meeting of the Western Medical Society March 14 in Spencer at Roane General Hospital. His topic was diabetes, lipids and hypertension.

Erlinda Ambrosio, M.D., who attended the Mid-Winter Clinical Conference in Huntington in January, reported on the proceedings of that meeting.

The Society decided to place an advertisement in support of eliminating the collateral source rule in the Jackson and Roane County newspapers.--A. H. Morad, M.D., Secretary.

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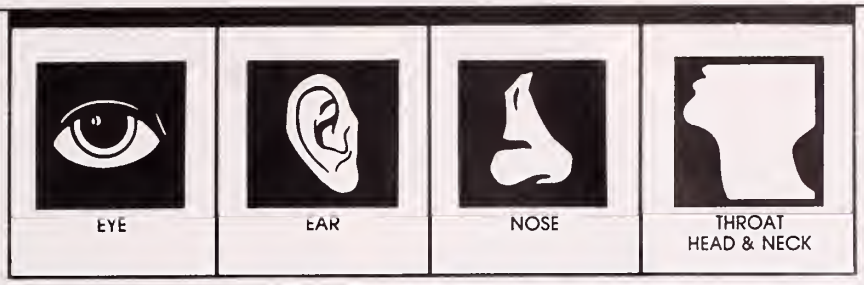

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Red Eye Syndrome
Retinal Diseases
Tonsillectomies/Adenoidectomies

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R. D. Morris, D. O. (New Martinsville)
C. McCool, M. D. (St. Clairsville)
T. Gary Kenamond, M. D.

Peripheral Vascular Disease
J. D. Holloway, M. D.

Cardiovascular
A. M. Valentine, M. D.
W. E. Noble. M. D.

Gastroenterology
T. E. Chvasta, M. D.
L. R. Cain, M. D.

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C. A. Vasquez, M. D.

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M. A. Stevens, M. D.

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C. McCool, M. D.

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J. H. Mahan, M. D. (St. Clairsville)
R. L. Cross, M. D. (Martins Ferry)

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H. Shackleford, M. D.

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E. L. Barrett, M. D.
R. S. Glass, M. D.
J. Melia, M. D.

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B. M. McCuskey, M. D.

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R. W. Lebold, M. D.

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J. W. Campbell, M. D.
C. V. Porter, M. D.

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E. L. Coffield. M. D. (Martinsville)
G. E. Sella, M. D. (Colerain)
S. Childers, M. D. (St. Clairsville)
W. G. Bell, M. D.

DERMATOLOGY
M. Baron, M. D.

NEUROLOGY
H. L. Kettler, M. D.
W. Zyznewsky, M. D.
S. Govindan, M. D.

Neuropathology
S. Govindan, M. D.

Pediatric Neurology
Rajav R. Varma, M. D. (consultant)

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D. H. Smith, M. D.
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CAFAD276

Please see brief summary of prescribing information, and reference on adjacent page.

0160N8

CARAFATE®
(sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:
1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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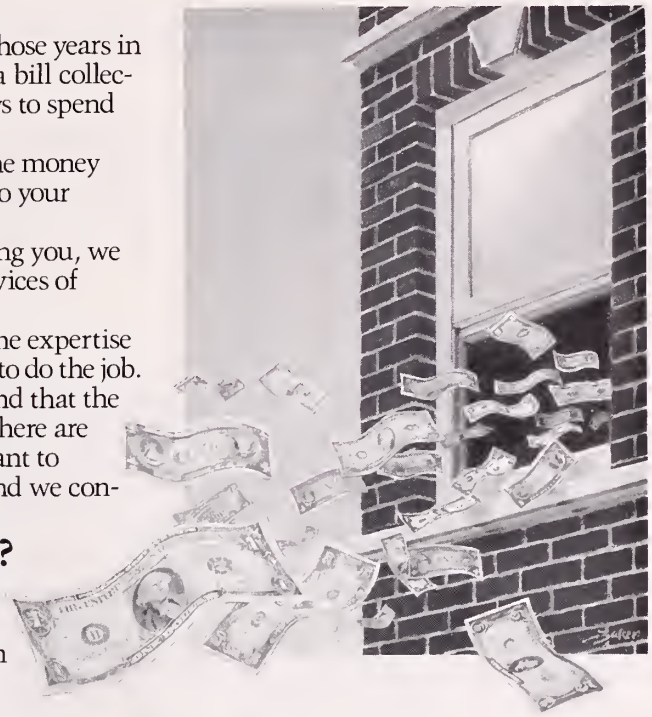

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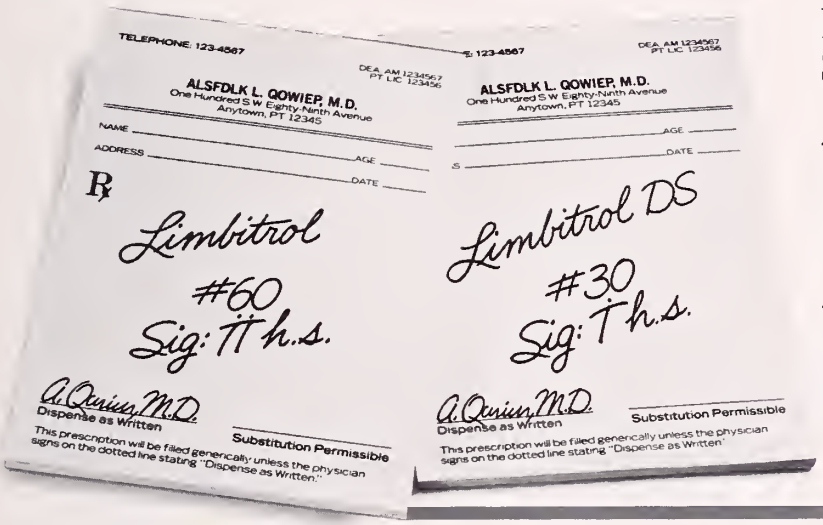
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



Protect Your Prescribing Decision: Specify "Do not substitute."

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Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓥ

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61:*217-225, Mar 22, 1979.

Limbitrol®Ⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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- First-week reduction in somatic symptoms[1]

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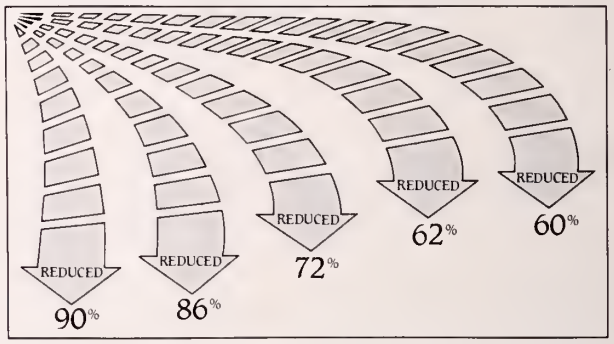
Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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West Virginia Medical JOURNAL

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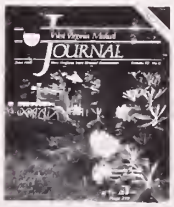

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In the Community Hospital

Percutaneous Transthoracic Needle Aspiration Lung Biopsy

RICHARD THOMPSON, M.D.
JAMES WILLS, M.D.
HENRY SETLIFF, M.D.
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In 108 cases in which transthoracic needle aspiration biopsies were studied at Raleigh General Hospital in Beckley, West Virginia, from 1983 through 1987, the pathologic diagnoses were compared and correlated with the subsequent clinical course. The procedure was performed under C.T. guidance.

Correlation of pathology with the clinical course yielded 67 per cent (72 cases) true positives, 19 per cent (20 cases) true negatives, four per cent (four cases) false negatives, zero per cent (zero cases) false positives, and 11 per cent (12 cases) indeterminates. In 23 per cent of the cases, there were radiologically demonstrated pneumothoraces, with placement of a chest tube required in 12 per cent of the cases. Hemoptysis occurred in eight per cent of the patients.

The results confirmed the appropriateness of using transthoracic needle aspiration biopsies at this hospital.

Transthoracic needle aspiration lung biopsies (TNLB) are done in major medical centers across the country and worldwide. Most have been done using fluoroscopic guidance (1, 3, 4, 5, 8). This study was done on procedures at a rural West Virginia hospital using C.T. guidance, and was intended to determine the success of transthoracic needle aspiration biopsies in a community hospital not associated with a major medical center.

A good candidate for TNLB is a patient who has a localized pulmonary mass or infiltrate histologically undiagnosed by conventional methods such as sputum examination and culture, bronchoscopy and serological studies.

Up to 60 per cent of the lesions that are removed by surgery are inflammatory or of a benign nature, so that resection may not be necessary (1). Thoractomy entails considerable morbidity and mortality which can be avoided if the benign nature of an intrapulmonary lesion is diagnosed preoperatively. A positive diagnosis before thoracotomy enables the surgeon to plan the operation carefully and to proceed with a definite technique and minimum operating time.

"Use of TNLB can save time and money, minimize complications, reduce hospital stay, and decrease mortality."

Use of TNLB also can spare the patient unnecessary surgery if the lesion is unresectable. Thus, any minor procedure that is technically easy to perform, does not entail undue risk to the patient, and yields data for comparison may be regarded as a complement, if not an alternative, to thoractomy (1).

Transthoracic needle biopsy of the lung is a fast, reliable, and cost-effective method of diagnosing pulmonary malignancy in middle and peripheral lung lesions. The procedure has a low morbidity and mortality, although pneumothorax is a complication to be expected (2). Most pneumothoraces following transthoracic needle biopsy are identified radiographically immediately following biopsy; any decision concerning the necessity for inpatient surveillance and possible chest tube insertion can be made within minutes to hours of observation following the procedure.

Materials and Methods

If only plain chest radiography or tomography has been done, a standard C.T. examination is performed. If the patient has been previously scanned, only a few localizing slices are done, and the lesion is pinpointed. If there are multiple lesions, the one most likely to be diagnosed is selected. The patient is positioned in the C.T. scanner in the most convenient obliquity, and the entry point is selected on the skin. This is confirmed by the use of a small lead shot marker and a single, subsequent C.T. slice.

Suitable local anesthesia is obtained, and a shallow stab wound is made with a #11 blade. A 20-gauge Franseen biopsy needle is then advanced stepwise into the lesion, with confirmatory C.T. slices taken. Standard aspiration and handling techniques are used. The specimen is then sent to the laboratory for cytology. The procedure is easy to perform and takes only a short time.

Cases classified as true positive had pathology examinations positive for malignancy, and either a subsequent positive biopsy or death from disease, or a clinical course consistent with malignant disease. Cases

classified as true negative were diagnosed as negative by the pathologist, and had a clinical course consistent with benign disease or subsequent biopsy proving benign disease.

Cases classified as false negative were diagnosed as pathologically negative, and had a subsequent positive biopsy or a clinical course consistent with malignant disease.

Cases identified as indeterminate involved patients whose aspirates were originally nondiagnostic because there was a lack of cells, or the material obtained was not from the tumor in question.

The malignant cells were classified as squamous cell, oat cell, poorly differentiated, papillary, epidermoid, anaplastic, or adenocarcinoma.

Results

A total of 116 transthoracic needle aspiration biopsies were performed at Raleigh General from 1983 through 1987. Eight of the procedures were excluded from the study due to lack of information in the patients' charts, or to inadequate follow-up during the time from the procedure to the date of this study.

This study involved 106 patients and 108 procedures. Males composed 63 (59 per cent) of the study group while 43 (41 per cent) were females. Of these 106 patients, 76 had a malignant intrathoracic neoplasm confirmed by death from malignancy, positive clinical course or subsequent positive biopsy.

The sensitivity of the procedure was 95 per cent while the specificity was 100 per cent. The specificity, which might appear abnormal at first, is actually consistent with most reports due to the fact that it is very difficult to obtain a false positive with this procedure (6). This fact is very helpful clinically. [Sensitivity is defined as the number of true positives divided by the total number of positives while specificity is defined as the number of true negatives divided by the number of total negatives.]

The incidence of pneumothorax (23 per cent) is comparable to or below most reports on transthoracic percutaneous needle lung biopsy (1, 2, 3, 5, 8, 9). All pneumothoraces were resolved either by chest tube (52 per cent) or without treatment (48 per cent). No recurrence was reported in any case. The alternative procedure (thoracotomy) requires a chest tube in 100 per cent of the patients while only 12 per cent in this study required chest tube placement.

An interesting incidential finding was that 21 per cent of the patients had pneumoconiosis, assumed to be due to the prevalence of coal mining in the area. All of these patients were males. Pulmonary hemorrhage occurred in six per cent of the patients while two per cent suffered chest wall hematoma. No other complications were reported.

"The success of TNLB at Raleigh General Hospital suggests that this procedure can be done in other community hospitals having the equipment in West Virginia and nationwide."

As expected, the overwhelming majority of patients (79 per cent) related a history of cigarette smoking. Seventeen per cent had no history of tobacco abuse and, in four per cent, no history was obtained.

Most of the biopsies were inpatient procedures, with the average hospital stay being one day. Currently the number of procedures performed on an outpatient basis is increasing.

Discussion

TNLB was introduced to Raleigh General Hospital in 1983, and its use has greatly increased since. This procedure has proved its usefulness with zero mortality and only minor complications which resolved within a few days. The most common alternative to TNLB is thoracotomy (7). Thoracotomies are more risky and expensive (1). If the needle biopsy is performed on an outpatient basis, the cost is even lower. It has been stated that the complication rates of TNLB are acceptable, given the alternatives (3). It has also been suggested that this procedure can be performed in any hospital (8).

Results of this study are comparable to those of studies at major medical centers across the country (1-9). The success of TNLB at Raleigh General Hospital suggests that this procedure can be done in other community hospitals having the equipment in West Virginia and nationwide. Use of TNLB can save time and money, minimize complications, reduce hospital stay, and decrease mortality.

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Aggressive Use of Intra-Aortic Balloon Pump and Emergency Coronary Bypass Surgery

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This report describes our experience with prophylactic and therapeutic use of IABPs prior to and following coronary artery bypass grafting (CABG) in 39 patients experiencing acute evolving myocardial infarctions (AEMI). All patients showed objective evidence of coronary thrombosis (contrast angiography) followed by later evidence of streptokinase (SK)-induced restoration of antegrade blood flow in the infarct-related coronary artery (as determined by repeat angiography).

In these 39 high-risk patients, 38 survived and were discharged. One patient died (2.6 per cent) on the twelfth postoperative day.

Introduction

Since the first successful clinical application of the intra-aortic balloon pump (IABP) by Kantrowitz in 1968 (1), indications for the use of intra-aortic balloon pumping have expanded to include unstable angina, cardiogenic shock, preoperative hemodynamic instability, postcardiotomy patients difficult to wean from cardiopulmonary bypass, and deteriorating cardiac patients in the ICU (2). Although multiple mechanisms are postulated as responsible for myocardial improvement (3, 4), there is no doubt that the jeopardized myocardium derives significant benefit from this device. Furthermore, as more reports are published, higher percentages of salvage appear possible when IABPs are used following appropriate criteria (5) and early insertion (6).

Methods

From October, 1981, through July 1986, 208 patients (Figure 1) with acute evolving myocardial infarction (AEMI) underwent emergency coronary angiography with attempted streptokinase (SK) thrombosis at The Western Pennsylvania Hospital (Pittsburgh) and the Trover Clinic Regional Medical Center (Madisonville, Kentucky). Pertinent demographic and clinical information, plus the time frame of events from admission to the emergency room until starting cardiopulmonary bypass, are listed in Table 1.

Of the 208 patients studied, 39 who showed objective evidence of coronary thrombosis (contrast angiography) followed by evidence of SK-induced myocardial salvage were selected for coronary artery bypass grafting (CABG). This evidence consisted of: 1) cessation of clinical symptoms simultaneous with restoration of coronary blood flow through the previously infarcted artery, 2) rapid improvement of ST segment current of injury to the isoelectric baseline on the EKG, 3) the appearance of reperfusion arrhythmias, and 4) evidence of increased myocardial contractility in the infarcted region previously visualized as hypocontractile or noncontractile on the left ventriculogram.

Information regarding each patient's clinical course was collected through retrospective chart review in the first 22 cases and through prospective protocol data accumulation in the remaining 17 cases. All patients were followed from the time they entered the emergency room until completion of CABG surgery. Specific areas of evaluation

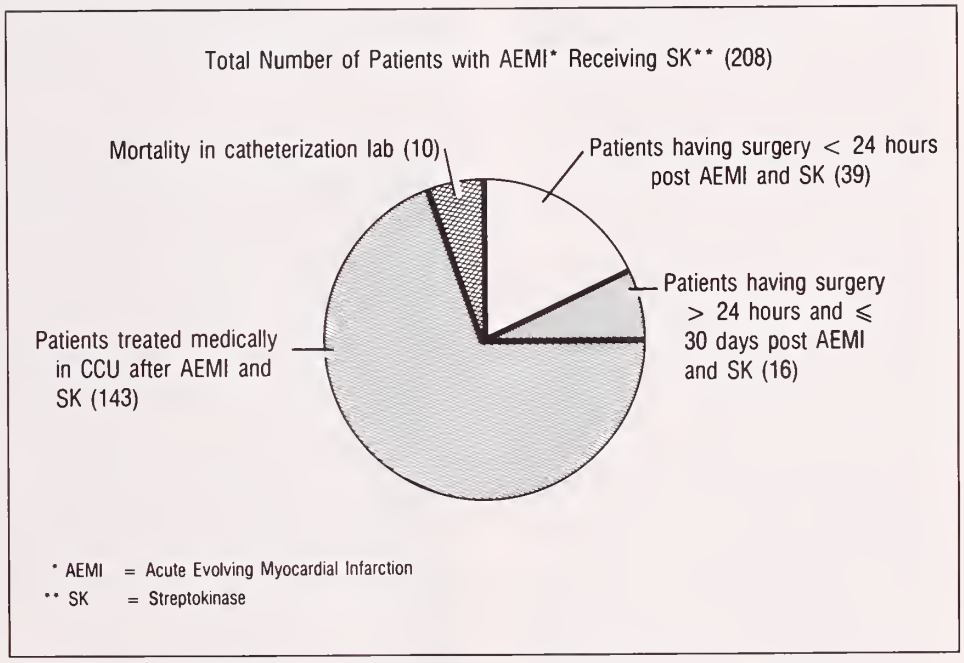

Figure 1. Acute evolving myocardial infarction population receiving streptokinase

included: 1) demographic information including the time frame of events from admission to the emergency room until starting cardiopulmonary bypass, 2) total invasive monitoring and hemodynamic assist device placement, 3) anesthetic agents, 4) induction complications, and 5) operative complications.

Routine monitoring equipment included both invasive (pulmonary artery catheters and arterial lines) and non-invasive (genitourinary temperature-monitoring catheters, esophageal temperature-monitoring stethoscopes, and Perkin-Elmer mass spectrometry gas analysis (at The Western Pennsylvania Hospital only).

For invasive monitoring and hemodynamic assist devices, special emphasis was given to the time of insertion (i.e., Cath Lab, O.R., etc.), and to the relationship between the time of insertion and the time of surgery (Table 2).

Results

A total of 39 SK patients suffering acute coronary artery thrombosis (documented by contrast angiography) required emergency CABG to insure the myocardial salvage achieved after initial SK thrombolysis. In all 39 patients emergency CABG started within 24 hours of their entry into the emergency room.

Invasive monitoring and hemodynamic assist devices are detailed in Table 2. All patients had arterial lines, and 95 per cent had PACs at incision. Especially significant is the high percentage of both temporal transvenous pacemakers (56 per cent) and IABPs (64 per cent) listed under "Total at Incision" which were actually inserted prior to induction. Of equal significance are the 14 patients who did not receive IABPs prior to induction. Five (36 per cent) of these later required the insertion of an IABP to be weaned from cardiopulmonary bypass. Two patients (five per cent) developed significant complications associated with the use of IABPs. Both of these patients manifested thrombosis of the vessels used for IABP insertion, and later had to be returned to the operating room for thrombectomy.

Anesthetic induction and maintenance drugs were conventional in both category and dosage: the sedatives consisted of diazepam and lorazepam; narcotics included fentanyl and sufentanil, and the non-depolarizing muscle relaxants were pancuronium and vecuronium. Complications occurring during induction included: hypotension requiring pharmacologic support - BP < 100 torr systolic but > 60 torr (eight patients), profound hypotension - blood pressure < 60 torr systolic (five patients) sudden bradycardia (one patient), and unexpected difficult intubation (one patient). None of the patients sustaining profound hypotension during induction had IABPs. Also, the one patient who sustained sudden bradycardia had not received a temporary transvenous pacemaker. The overall induction complication rate

TABLE 1

Demographic Information Regarding Acute Evolving Myocardial Infarction Population

Total Number of Patients	39
Males	35
Females	4
Mean Age ± SD (years)	56 ± 11.7
Range	(31 - 75)
Mean Times ± SD (min)	
ER to Cath Lab	158 min ± 205 min
Cath Lab to OR	562 min ± 479 min
Arrival in OR to Incision	51 min ± 21 min
Incision to bypass	50 min ± 27 min
Mean Dosage of SK ± SD (units	
Intracoronary (34 patients)	270,118 ± 94,789
Range	(150,000 - 500,000)
Peripheral Intravenous (5 patients)	1,150,000 335,410
Range	(750,000 - 1,500,000)
Mean Pump Run Time ± SD (min)	118 min ± 35 min
Range	(39 - 202)
Mean Cross Clamp Time ± SD (min)	56 min ± 20 min
Range	(0 - 110)
Number of grafts ± SD	3 ± 1
Range	(1-5)

TABLE 2

Invasive Monitoring and Hemodynamic Assist Devices (39 Patients)

		OPERATING ROOM			
	CATH LAB	Prior to Induction	Prior to Incision	Total at Incision	Devices Added to Wean From Bypass
PAC +	13 (33%)	18 (46%)	6 (15%)	37 (95%)	0
Temporary Transvenous Pacemaker	20 (51%)	2 (5%)	0	22 (56%)	0
Arterial Line	14 (36)	28 (72%)*	0	42 (100%)	0
IABP**	19 (49%)	6 (15%)	0	25 (64%)	5 (13%)

+ Pulmonary artery catheter

* Some patients with IABP had additional arterial lines

** IABP Intra-aortic balloon pump

was 31 per cent, with some patients developing more than one complication.

Operative complications occurred in six (15 per cent) patients. These complications included: excessive post-bypass bleeding - total estimated blood loss > one standard deviation - 1172 cc (three patients), bleeding at IABP site (two patients), and the development of non-A non-B hepatitis postoperatively in one patient with an eight-donor-unit exposure. No patients were returned for postoperative bleeding or pericardial tamponade.

There were no deaths in the immediate postoperative period. One patient died 12 days postoperatively due to intractable cardiogenic shock and multiple system failure as a result of a second documented and non-SK-treated myocardial infarction. This patient did have IABP support prior to induction of CABG and postoperatively. All other patients were discharged from the hospital without significant physical or mental impairment.

Discussion

Intra-aortic balloon pump (IABP) counterpulsation involves the placement of a relatively non-distensible polyurethane, nonthrombogenic, sausage-shaped balloon in the descending thoracic aorta, just distal to the left subclavian artery (7) (Figure 2). This is usually introduced through the femoral artery using either a Dacron graft sutured to the femoral artery (8) or the more popular percutaneous insertion technique as suggested by Seldinger (9). The intra-aortic balloon is mounted on a vascular catheter that communicates with the lumen of the balloon (Figure 3), allowing transfer of helium, carbon dioxide gas or both into the balloon (inflation) and out of the balloon (deflation) (10). The balloon catheter extends from the femoral insertion site and is attached to a balloon pump console which allows triggering (balloon deflation synchronized to the cardiac cycle) to either 'R' wave detection on EKG or arterial wave pulsation (11) (Figure 4).

FIGURE 2. The intra-aortic balloon pump is most commonly placed through the right femoral artery using a percutaneous technique. The balloon should eventually rest in the thoracic and abdominal aorta beyond the left subclavian artery and above the renal arteries.

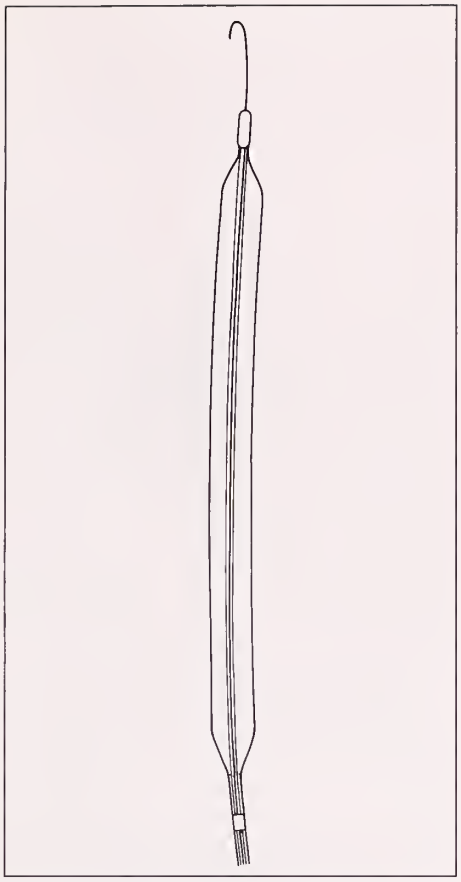

FIGURE 3. The intra-aortic balloon consists of a vascular catheter which communicates with the lumen of the relatively non-distensible balloon membrane.

Since its description by Moulopoulos in 1962 (12), use of the IABP to assist salvage of infarcted or jeopardized myocardium has become increasingly successful. Early reports regarding postcardiotomy low-output syndrome described survival rates of 37 per cent to 63 per cent (13-18). More recently, Tahan (6) described preoperative IABP insertion in a series of 91 consecutive patients in which 35 of the highest-risk patients had preopera-tive IABP placement. Here, the total postoperative mortality was one in 35 or 2.9 per cent. In our patients, we examined two phases (preoperative and postcardiotomy) of IABP insertion. In these patients, primary indications for insertion of the IABP included: persistent ST segment current of injury despite apparent successful pharmacologic or invasive therapy (SK or SK combined with angioplasty), evidence of extension of the original myocardial infarction, elevated wedge pressures >18 torr accompanied by pulmonary edema, low cardiac output syndrome confirmed by multiple cardiac output determinations, malignant arrhythmias, and episodes of CPR requiring endotracheal intubation. In the preoperative phase, 64 per cent of our 39 patients had IABPs inserted prior to induction while in the

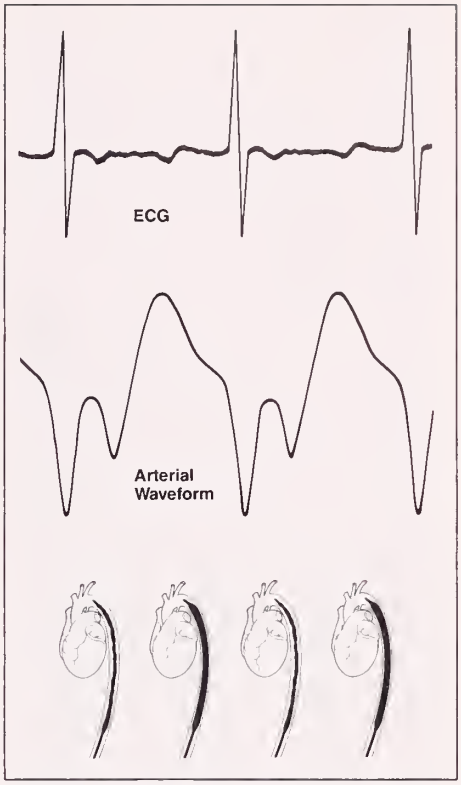

FIGURE 4. Shows two typical counterpulsation cycles. The balloon is rapidly inflated at the beginning of diasystole immediately after the aortic valve closes. Rapid deflation occurs just before the next systole.

postcardiotomy phase, five of the remaining 14 who did not receive IABPs (36 per cent) required IABP insertion for successful weaning from cardiopulmonary bypass. Our total mortality was 1/39 or 2.6 per cent (the one mortality had an IABP inserted while he was in the cath lab), which compares well with Tahan's results.

Induction complications (31 per cent) and operative complications (18 per cent) were significant but manageable. High percentages of pulmonary artery catheters (PACs) (95 per cent) and temporary transvenous pacemakers (TTPs) (56 per cent) aided treatment by providing valuable monitoring and offering potential treatment for sudden arrhythmias. However, this monitoring in no way substituted for the service performed by the IABPs. Lastly, despite the complications noted above (and others typically associated with cardiogenic shock), no patients were denied surgery because of age, unconsciousness, pulmonary edema, hemodynamic instability, or severe arrhythmias requiring external cardiac compression.

Complications of IABP have been documented by many earlier authors. (19-24). These complications have ranged between four per cent and 36 per cent, depending on whether they were calculated on all insertions or only on patients who survived to have the balloon removed (24). Primary complication categories include insertion site injury, arterial thrombosis, arterial occlusion, and perforation or damage to the abdominal aorta. Treatments have included: local artery revision, thrombectomy alone, or thrombectomy with femoro-femoral crossover grafting when the patient's hemodynamic instability would not allow premature balloon removal.

Although some moderate-to-severe vascular insufficiency did occur in our patients, none of them required femoro-femoral bypass grafting, and only two (five per cent) were returned to the operating room for postoperative thrombectomy. Two patients had significant immediate postoperative bleeding at the balloon insertion site which resolved with sand-bag compression and improvement of their coagulation derangements. There were no unsuccessful balloon insertion attempts. This primarily was due to placement of IABPs through the arteriography cannulation site (64 per cent) while the patient was in the cardiac catheterization lab. In most of the other patients (36 per cent), the arterial sheath was left in place while the patient was brought to the operating room. When not used for balloon insertion, it functioned as the arterial monitoring site. Even though the insertion techniques utilized were not specifically recorded, all of the IABPs were inserted using the newer percutaneous Seldinger technique rather than utilizing a cutdown and placement of the IABP through a graft sutured to the femoral artery.

"At our institution, the IABP has evolved from a 'last-ditch effort' to wean a moribund patient with low cardiac output syndrome from cardiopulmonary bypass to a valuable prophylactic and therapeutic tool . . . "

Our results, together with that of other authors, support the value of the IABP when used both prophylactically and therapeutically for patients who require cardiac anesthesia complicated by serious left ventricular dysfunction, impending myocardial infarction, or both (25, 26, 27). Yet, despite this evidence, some reports (such as O'Rourke, et al. (28)), still fail to show any infarct diminution or difference in morbidity or mortality when IABPs were initiated as a primary therapy within 4.8 to 13.7 hours after the onset of myocardial infarction symptoms.

In spite of an occasional contradictory report, the preponderance of articles to date support the idea that the salvage of high-risk anesthetic and surgical patients with myocardial infarction, ventricular failure, or both has improved progressively with the experience gained from prior use of IABPs. At our institution, the IABP has evolved rom a "last-ditch effort" to wean a moribund patient with low cardiac output syndrome from cardiopulmonary bypass to a valuable prophylatic and therapeutic tool that can be used during many phases in the care of patients with hemodynamic instability, preinfarction angina, pharmacologically uncorrectable myocardial shock, and preoperative high-risk conditions. This valuable tool is not meant to substitute for careful pharmacologic manipulation but to complement it when unusual accepted management techniques are either marginally effective or simply not working.

To date, conclusive predictors for the use of IABPs still do not exist (5). However, successful clinical results based on our case experience and a review of the literature indicate that the following important considerations should be kept in mind when treating patients needing or having IABPs:

1) IABPs should be placed as early as possible, either prior to or immediately following the realization of pharmacologically refractory ventricular deterioration.
2) At induction, IABPs should be continued at a 1:1 ratio (each systole is followed by one counterpulsation) unless medical or surgical priorities require otherwise.
3) During the operative procedure, the IABP should be triggered by the arterial wave form when the electro-surgical units (ESUs) mask EKG electrical activity.
4) Although carbon dioxide (CO_2) appears safer than helium for balloon inflation at non-rapid heart rates if balloon perforation should occur (23), current usage does not generally support CO_2 as a driving gas when one considers the benefits associated with helium.
5) Age, ejection fraction and incidence of previous myocardial infarctions appear useful in identification of patients who may require postcardiotomy IABP (5).

In summary, these results demonstrate the value of the IABP when used in combination with conventional, aggressive cardiac anesthetic techniques in patients who have sustained acute evolving myocardial infarction followed by SK thrombolysis and emergency CABG. In these patients, early IABP insertion functioned as an anesthetic tool when used with pharmacologic and other invasive therapy to stabilize cardiac patients suffering unstable angina, cardiogenic shock, preoperative hemodynamic instability, and difficulty in weaning from cardiopulmonary bypass.

Complications consisted of thrombosis in the IABP insertion artery and postoperative bleeding at the IABP insertion site. All complications were manageable, and appear justified when one considers the gain in stability. Lastly, the technology required to use the IABP is within the capacity of any center dealing with critically ill cardiac patients.

Acknowledgement

The authors wish to thank Annette Fasnacht and the Datascope Corporation for their biomedical illustration assistance and technical review of this manuscript.

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Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Immunological Approaches To Cancer Treatment

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A better understanding of cellular immunology and advances in recombinant DNA technology have led to a new dimension in the immunological treatment of cancer in which the potential for success is greatly increased. The number of biological agents with the ability to enhance the host's anti-tumor defense mechanisms has markedly increased during the last decade. The development of clinical trials with these biological response modifiers is an area of intense research. As a result of these investigations, a variety of malignancies now can be treated successfully by immunological approaches.

Progress in the treatment of cancer and, for that matter, most other diseases, is limited by the resources available. Early attempts of immunotherapy of cancer were mostly unsuccessful because the technology and knowledge of

TABLE 1 Mechanisms of Modification by Biological Response Modifiers
Augmentation of host effector mechanisms
Administration of natural or synthetic effector mechanisms
Modification of tumor cells
Increase the ability of the host to tolerate cytotoxic modalities

TABLE 2 Clinical Development of Biological Response Modifiers
PHASE I: A: Determine toxicity of the agent B: Determine dose, route, and schedule that produces the maximum biological effect
PHASE II: Identify malignancies in which the agent has reproducible antitumor activity
PHASE III: Determine the specific role of the agent in the treatment of malignancy

cellular immunology were very limited. However, we have entered a new era in which our knowledge of cellular immunology and the various hormonal regulators of the immune response is markedly improved. In addition, modern recombinant DNA technology has made it feasible to produce large quantities of these hormonal regulators for further study. The potential for success in the immunological approach to cancer has greatly expanded.

Probably the first deliberate and successful attempts of immunotherapy of cancer were performed in the early part of this century by William Coley at Memorial Hospital in New York. He treated a number of patients who had advanced cancer with a series of injections of a mixed bacterial toxin preparation which subsequently has been referred to as Coley's Toxin (1). Some of these patients experienced remarkable regressions of their tumors and improvement in survival.

Although Coley did not know the exact mechanism by which his toxins caused tumor regression, he did understand that the effect was not a direct effect of the toxins on the tumor cells since many of the patients were treated solely by systemic injections. He believed that the toxins caused changes within the host, possibly immunological, that were unfavorable for tumor survival. This modality of treatment is now referred to as Biological Response Modification.

Biological Response Modifiers

Definition

Biological response modifiers (BRMs) can be defined as agents or approaches to treatment that modify the relationship between tumor and host by changing a host's biological response to tumor cells, resulting in therapeutic benefit. There are several different mechanisms by which BRMs can modify the host response (Table 1). The host's immune and other effector mechanisms can be augmented by the administration of agents that can stimulate these responses (eg., immunomodulators, tumor vaccines, etc.). The host response can be augmented by the administration of these effector mechanisms (eg., interferon and other cytokines, adoptive immunotherapy, etc.) or by the modification of tumor cells so that they become more susceptible to host defense mechanisms (eg., monoclonal antibodies, cyclooxygenase inhibitors, etc.). In addition, agents may enhance the ability of the host to tolerate other cytotoxic modalities (eg., colony stimulating factors).

Clinical Development of BRMs

It recently has been recognized that the clinical development of BRMs should take a different approach than that traditionally used for cytotoxic chemotherapeutic agents (2). The lack of a unique approach for the development of BRMs could account for some of the failures observed in the early clinical trials. The BRMs that are chosen for clinical development are those that have been shown to be effective in a variety of preclinical investigations. Clinical development of the BRMs can be categorized into different phases of study (Table 2).

The purpose of Phase I is to determine the toxicity of the agent and the dose to be used in more advanced phases of development. For BRM development, Phase I should be subdivided into two different types of studies. Phase IA should be performed initially to determine the maximum tolerated dose (MTD) of the BRM. In regards to cytotoxic chemotherapeutic agents, this phase is all that is usually needed before a drug is tested in more advanced phases since the MTD is usually the same dose that yields the maximum antitumor effect.

However, this is not necessarily the case with BRMs since, in some cases, higher doses have been found to be less effective than lower doses. It therefore is necessary to perform Phase IB studies to determine the optimum biological response modifying dose (OBRMD). The OBRMD is that dose and schedule that causes the maximum enhancement of those host effector mechanisms which are believed to be important in mediating the antitumor effect. The OBRMD may be considerably less than the MTD.

The effector mechanisms usually studied include measurements of peripheral blood lympocyte and monocyte phenotypic markers, natural killer (NK) cell activity, lymphokine-activated killer (LAK) cell activity, and antibody-dependent, cell-mediated cellular cytotoxicity (ADCC). Whether other parameters such as the levels of plasma lymphokines and cytokines also should be studied is a topic of current controversy.

The purpose of Phase II studies is to identify malignancies in which the agent has reproducible antitumor activity and, for Phase III studies, to determine the specific role of the agent in the treatment of malignancy.

Another major difference between the clinical development of BRMs and cytotoxic chemotherapy is the selection of patients for such studies. Clinical trials of cytotoxic chemotherapeutic agents usually involve patients with advanced malignancy. Such patients may be appropriate for Phase IA studies of BRMs, but are not ideal for Phase IB, II or III. Patients with advanced cancer are usually immunosuppressed by the nature of their disease or prior treatment, and may not be capable of responding to the BRM. Therefore, strong consideration should be given to studying only those patients with minimal tumor burdens. Some of the earlier studies with BRMs may have failed because they were performed in patients

with advanced malignancy. It is clear that the clinical development of BRMs is much more complicated than that for others modalities of cancer treatment.

Modalities of Treatment

The BRMs represent a variety of agents which can be classified broadly into several different categories as shown in Table 3 (3).

Immunomodulatory Agents

The immunomodulatory agents are exogenous substances, both natural and synthetic, which, when administered to the host, can stimulate the immune response, usually by a complex cascade of events involving different types of cells and tissues including the immune system. The number of immunomodulatory agents are too many to list in this paper but include: microorganisms such as BCG and C. parvum; synthetic compounds such as isoprinosine, muramyldipeptide, interferon inducers, and cyclooxygenase inhibitors; and antineoplastic agents such as cyclophosphamide and adriamycin. Within each group, many more examples exist.

All of these agents have been shown to possess immunomodulatory properties, and many inhibit tumor growth in preclinical studies. Although some of these agents have not been thoroughly investigated, only a few have been shown to be effective clinically. Of the microorganisms, BCG, which is an attenuated strain of mycobacterium bovis, probably has been the best studied, and has antitumor activity in several clinical settings. The direct administration of BCG into skin recurrences of melanoma and breast carcinoma causes regression in the majority of lesions. The intravesicular administration of BCG is highly effective in the treatment of urinary bladder cancer, and has been shown to reduce significantly the recurrence rate and improve the survival of patients with superficial carcinoma (4). In the very near future, the FDA probably will approve the use of BCG in the treatment of these patients.

TABLE 3
Classification of Biological Response Modifiers

IMMUNOMODULATORY AGENTS
CYTOKINES
MONOCLONAL ANTIBODIES
ACTIVE IMMUNIZATION
ADOPTIVE IMMUNOTHERAPY

TABLE 4
Cytokines

INTERFERONS
LYMPHOKINES
MONOKINES
THYMIC HORMONES
GROWTH AND DIFFERENTIATING FACTORS
NEUROPEPTIDES

"The number of biological agents with the ability to enhance the host's anti-tumor defense machanism has markedly increased during the last decade"

Cytotoxic chemotherapeutic agents generally have been considered to be immunosuppressive; however, depending upon dose and schedule of administration, some of these agents can stimulate the immune response. Certain experiments have shown that both cyclophosphamide and adriamycin are capable of inhibiting suppressor T lymphocytes, and result in a net immunostimulatory response. As is the case with many of the other immunomodulatory agents, the cytotoxic chemotherapeutic agents alone are not very active, but may prove to play a synergistic role when combined with other treatments.

Cytokines

With the development of modern recombinant DNA technology, it is now feasible to produce large quantities of the hormonal regulators of the immune response for use in experimental studies and treatment. Cytokines are cell-derived substances, usually glycoproteins, that are produced in response to certain endogenous and exogenous stimuli, and that possess regulatory or cytotoxic effects on other cells and tissues. The recombinant forms of these substances have been shown to possess most, if not all, of the biological properties of the natural products. The different types of cytokines that may play a role in the modulation of the immune response and tumor growth are listed in Table 4. These substances have a variety of effects on different cells and tissues.

Interferons: The interferons probably are the most extensively studied of the cytokines. Three different types of interferon (IFN) exist, and are classified according to their major natural source: leukocyte or alpha-INF, fibroblast or beta-INF, and immune or gamma-IFN.

The properties shared by the IFNs include: antiviral, antiproliferative, immunomodulatory, and antitumor. The IFNs can also affect cell differentiation, oncogene regulation, and the expression of certain surface membrane antigens.

The INF which has been most extensively studied in patients with malignancy and immunodeficiency disorders is alpha-IFN. The majority of patients with hairy-cell leukemia, a neoplastic disorder of B lymphocytes, have a beneficial response with a decrease in the malignant cell population and a restoration of normal hematopoiesis. In some patients, there is also an improvement in immune function and ability to produce endogenous alpha-IFN. Significant side effects can occur with this agent, especially fever, chills, myalgia, and fatigue. However, these flu-like symptoms are usually mild in patients receiving low doses, and commonly resolve with continued treatment.

Because of the overall therapeutic effects, the FDA has approved the use of alpha-IFN in patients with hairy-cell leukemia. Very recently, the FDA has also approved this

agent in the treatment of one other malignant disorder, asymptomatic AIDS-related Kaposi's sarcoma. Selected patients with this disorder who are not severely immunosuppressed have a 50- to 70-per cent response rate to alpha-IFN, but very high doses are required to achieve this effect.

Alpha-IFN has been shown to have antitumor activity in several other malignancies. In Phase II studies, this agent has been shown to have significant activity in Mycosis fungoides and selected patients with non-Hodgkin's lymphoma. In addition, about 15-20 per cent of patients with renal cell carcinoma, melanoma, and multiple myeloma may respond.

Probably the most interesting results have been obtained in patients with chronic myelogenous leukemia (CML). About 80 per cent of the patients with this type of leukemia will develop a transformation to an acute phase of their disease (blast crisis) which resembles acute leukemia and is almost always fatal. With the possible exception of bone marrow transplantation, no therapy during the chronic phase of CML, including aggressive cytotoxic chemotherapy, has been effective in preventing blast crisis transformation. Therefore, further investigations are warranted to find a cure of this disease.

Several studies have shown that the chronic phase of CML is very responsive to treatment with alpha-INF. Hematologic improvement occurs in about 80 per cent of patients treated with alpha-IFN alone. In addition to normalization of the blood cell counts, some of the patients experience an improvement in the cytogenetic abnormalities with a decrease in the leukemic clone as evidenced by the disappearance of the Philadelphia chromosome. Whether treatment with IFN alone or in combination with chemotherapy improves the survival of patients with CML is currently being investigated.

Tumor necrosis factor: Tumor necrosis factor (TNF) is another cytokine that is also being investigated in clinical trials. This substance is considered a monokine since it is produced mostly by stimulated monocytes and macrophages. It shares many of the biological properties of IFN. In addition to immunomodulatory effects, TNF has a direct cytotoxic effect on a variety of tumor cells in vitro. The administration of TNF to laboratory animals has been shown to cause a hemorrhagic necrosis of tumors in vivo, possibly secondary to its effects on vascular endothelial cells and the coagulation system. The role of TNF as a BRM in man is still being investigated.

Growth and differentiating factors: Of the many growth and differentiating factors, only a few have been investigated clinically. The most success has been obtained with a factor called granulocyte/macrophage colony stimulating factor, or GMCSF. GMCSF causes the differentiation and proliferation of granulocyte precursor cells in the bone marrow. Clinical trials in man have shown that the infusion of recombinant GMCSF in patients with myelodysplastic syndrome and AIDS-related leukopenia results in an improvement in number and function of mature granulocytes. However, this effect appears to be only transient and reverts shortly after the infusions are discontinued.

GMCSF also has been administered to cancer patients receiving myelosuppressive chemotherapy, and successfully attenuates the neutropenia that would otherwise occur if chemotherapy were administered alone (5). In this regard, treatment with GMCSF and related CSFs potentially could permit much higher doses of myelosuppressive chemotherapy to be administered with greater antitumor effect. Ongoing clinical trials are addressing this issue.

"GMCSF also has been administered to cancer patients receiving myelosuppressive chemotherapy, and successfully attenuates the neutropenia that would otherwise occur if chemotherapy were administered alone."

Neuropeptides: There is increasing evidence that many of the neuropeptides that are produced by neuroendocrine tissue can also be produced by the immune system, and that these substances may play an important role in regulating the immune response. The effects of the endogenous opioids such as beta-endorphin and the enkephalins on the immune response have been studied extensively and shown to have immunostimulatory effects including the enhancement of T lymphocyte function and NK cell activity (6).

The enkephalins have also been shown to inhibit the growth of B16 melanoma and improve the survival of mice bearing L1210 leukemia. It is possible that endogenous opioids and other neuropeptides mediate the effects of stress on the immune responses and tumor growth.

The potential role of these substances in the treatment of

TABLE 5
Schedule of IL-2/LAK Cell Administration

Procedure	*Schedule*
IL-2:100,000 U/Kg tid	Days 1-5
Leukapheresis	Days 8-12
IL-2:100,000 U/Kg tid	Days 12-16
LAK cell infusion	Days 12, 13, 15

TABLE 6
Toxicity of IL-2/LAK Cell Therapy

FEVER	83%
NAUSEA & VOMITING	68
DIARRHEA	68
CONFUSION	34
WEIGHT GAIN (>10%)	54
DYSPNEA	83
CREATININE >2 MG%	61
BILIRUBIN >2 MG%	78
EOSINOPHILIA >5%	95
ANEMIA	98
THROMBOCYTOPENIA	44
DEATH	1-2

cancer and immunodeficiency disorders warrants further investigation.

Monoclonal Antibodies

Tumor cells can be distinguished from their normal counterparts by the relative expression of certain surface membrane antigens called tumor-associated antigens (TAA). With the development of hybidoma techniques it became possible to produce sufficient quantities of monoclonal antibodies (MAb) directed against these TAA for purposes of diagnosis and treatment. However, there are several theoretical reasons why early clinical trials of MAb in patients with cancer have not met with much success. First, although MAb can bind selectively to tumor cells, in and of themselves, MAb are incapable of causing tumor cell lysis. Second, within a given tumor the cells vary in regard to the expression of TAA. Finally, MAb have a relatively short half-life when administered to man, probably due to the pharmacological nature of these murine proteins.

Ongoing research is addressing these problems by developing different forms of MAb. Some in vestigators are studying varoius conjugates of MAb bound to synthetic and natural toxic substances including toxins such as ricin, chemotherapeutic agents such as adriamycin or mitomycin-C, and radioisotopes. The MAb will function to target the toxic substance to the tumor cells where they would have a selective effect.

Other investigations are studying the antitumor effects of chimeric MAb in which the variable region is derived from murine MAb, and the constant region is derived from human MAb. It remains to be seen whether the pharmacologic and antitumor properties of these chimeric MAb prove to be superior. Many studies consider the use of cocktails containing MAb with specificities to several different TAA to overcome the problem of variable antigen expression.

Active Immunization

Active immunization involves the administration of autochthonous or allogeneic tumor cells or tumor cell products into a host with the hope of stimulating an immunological response to TAA. Although this modality makes theoretical sense, early clinical trials were mostly unsuccessful. Since TAA are weakly antigenic, and since patients with advanced cancer are usually immunosuppressed, an effective cellular immune response may not be possible. However, it recently has been shown that the adminisration of viable autochthonous tumor vaccine in combination with BCG to patients with Duke's stage B2 or C colon cancer resulted in improved survival compared to untreated controls (7). Further studies are needed to confirm these very encouraging results.

Adoptive Immunotherapy

The treatment modality that probably has recently engendered the most interest of both the scientific and lay community is that of adoptive immunotherapy. Adoptive immunotherapy involves the transfer to the host of immunocompetent cells which have the capacity of attacking and killing tumor cells. The incubation of spleen cells or peripheral blood lymphocytes in vitro in the presence of high concentrations of the lymphokine interleukin-2 (IL-2) results in the generation and proliferation of lymphokine-activated lymphocytes (LAK cells). LAK cells are cytotoxic to a large variety of tumor cells in vitro and in vivo, but apparently are not cytotoxic to normal cells.

"Future developments will depend upon discovering more active and less toxic treatment modalities."

Early work by Rosenberg et al. at the Surgical Branch of the NCI (8) showed that both IL-2 and LAK cells were capable of causing tumor regression in mice, and that the anti-tumor effect was most marked when IL-2 and LAK cells were administered in combination. Based on these preclinical models, a clinical trial of adoptive immunotherapy involving the administration of IL-2/LAK cells in patients with advanced cancer was initiated. The treatment protocol is outlined in Table 5.

Tumor regression was observed in a significant number of patients including 31 per cent of those with renal cell carcinoma. Responses were also observed in patients with colon cancer, melanoma, and non-Hodgkin's lymphoma. These studies have been extended to several other institutions under the sponsorship of the NCI and include treatment with high-dose IL-2 alone.

The toxicities of this treatment are quite significant and are listed in Table 6. Most of the serious toxicity is related to a "capillary leak syndrome" caused by the high doses of IL-2. Although the results of this innovative treatment are very encouraging, there is some controversy that the therapeutic benefits may be outweighed by the considerable costs and toxicities that are incurred (9). Certainly, adoptive immunotherapy should not be considered standard treatment for cancer, and at the present time should be administered only as part of an investigational protocol.

Future Developments

Future developments will depend upon discovering more active and less toxic treatment modalities. At the Surgery Branch at the NCI, Rosenberg and his colleagues are studying the therapeutic role of tumor-infiltrating lymphocytes (TIL) in patients with advanced cancer. TIL are a subset of lymphocytes that can be isolated from tumors and propagated in vitro in the presence of IL-2. Since these lymphocytes are much more cytotoxic against tumor cells, and require less IL-2 than LAK cells, they may be better suited for adoptive immunotherapy.

The intralesional administration of IL-2 has met with considerable success in preclinical experiments, and currently is being investigated clinically at a few centers. Donald Lamm, in the Department of

Urology at WVU and the Mary Babb Randolph Cancer Center, recently has received sponsorship from the NCI to conduct a study of intralesional IL-2 in patients with urinary bladder cancer.

It recently has been reported that the intralymphatic administration of low doses of IL-2 and LAK cells caused tumor regressions with no serious toxicity in all of seven patients treated in a preliminary clinical trial. A study of intralymphatic IL-2/LAK cells in patients with advanced cancer is expected to begin at our institution in order to confirm these very encouraging results. Many preclinical studies suggest that some of the cytokines act synergistically when administered in combination, and a number of clinical trials are planned to investigate the role of combination therapy in the treatment of cancer.

Conclusions

A better understanding of cellular immunology and advances in recombinant DNA technology have permitted us to enter a new dimension in which the potential for success in the immunological therapy of cancer is markedly increased. Preclinical models remain extremely important to the design of clinical trials and to the discovery of new anticancer agents. However, the tools that are already available should bring us much closer to the cure of cancer during the next decade.

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Health Care Cost Containment—

SB-576

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On April 26, 1989, Governor Caperton signed into law the Enrolled Committee Substitute for Senate Bill 576, more commonly known as the Health Care Cost Containment Act. The purpose of this article is to highlight, in a question-and-answer format, the more significant aspects of this legislation from the viewpoint of physicians, as well as to address some of the questions which have been posed to us by physicians familiar with or concerned about the legislation.

As the title implies, the term "answers" may be used rather loosely, because this legislation raises many more questions than it does provide answers. Even these areas of uncertainty are significant to the practicing physician, however, because the Department of Health and Human Resources is required to promulgate rules and regulations to implement this Act, and physicians may be in the best position to propose solutions to some of the unanswered questions.

Question 1: What is the thrust of the bill?

Basically, Senate Bill 576 gives the various state agencies, including Workers' Compensation, Medicaid, the Public Employees Insurance Agency (PEIA), and the Division of Rehabilitation Services, the ability to cooperate in establishing health plans and in obtaining cost efficiencies and, more significantly, gives them the authority (if they did not already have it) to set the maximum amount which physicians and other health care providers can charge for any health care services rendered to beneficiaries of one of these state plans. In addition, the bill requires any physician who provides services to a beneficiary of one of the plans to provide services to beneficiaries of all other state plans. Specifically, if a physician treats a beneficiary of, for example, either Workers Compensation or the PEIA program, that physician will then have to treat at least a specified percentage of Medicaid patients. (See Questions 8 through 10 below.)

Question 2: When does the bill become effective?

Technically speaking, the legislation was made effective from passage; however, Sally Richardson, Director of the PEIA, has stated that this was unintentional, and that it is at least her intention not to begin enforcing the provisions of the legislation until July 1, 1989. However, because none of the other agencies has stated its position on when enforcement of the legislation will begin, you should assume that it could be implemented at any time, and begin planning accordingly. For example, although the maximum rate provisions cannot be enforced by the PEIA until a rate schedule is developed by the PEIA, the requirement that you treat Medicaid patients if you treat PEIA or other state patients could be implemented any time.

Question 3: What are my options under the bill?

Every physician has two decisions to make under this legislation. The first decision is simply whether to treat any state patients at all, because the legislation does permit a physician to choose not to treat any beneficiaries of the state plans specified in the legislation, and thereby avoid application of the bill entirely. The second decision must be made only if a physician decides that he or she does wish to treat

**Editor's Note: Ms. Simpson, together with her law partner, Don Sensabaugh, was lobbying the State Legislature on behalf of the Association when S.B.-576 was introduced, and became involved in the discussions and negotiations with the Administration which resulted in the final compromise version.*

Questions and Answers (or More Questions?)

state patients; then the physician must decide whether he or she is going to treat state patients in the context of a preferred provider organization (PPO), or outside of a PPO. (For purposes of this article, the former shall be referred to as "PPO-participating" physicians and the latter shall be referred to as "non-PPO-participating" physicians.)

Question 4: Do I need to do anything if I decide not to treat any state patients?

Although the legislation itself does not require you to take any affirmative steps if you decide at the outset that you will not see any state patients, certain steps are advisable. Because even an inadvertent treatment of a beneficiary of a state plan can commit you to treat other state beneficiaries, it would be advisable to post a notice in your office clearly stating that you will not accept any patients who are beneficiaries of any state agencies participating in a cooperative plan, including Workers' Compensation, the PEIA, Medicaid and Rehabilitation Services.

Secondly, on your patient information sheet where you obtain information about the patient's insurance coverage, you might wish to add a specific section where the patient affirms that he or she is not eligible for benefits under any of the above-mentioned plans.

Thirdly, although it is not required of physicians who decide at the outset, rather than later on, not to see state patients, it might nevertheless be advisable to provide written notice of your intention not to see state patients to the director of the PEIA, in accordance with Code Section 16-29D-3(h).

Finally, for any of your patients who are beneficiaries of one of these state programs, you should begin immediately the process of winding up their treatment and giving them the opportunity to obtain a new physician who will treat them. The bill provides a transition period of up to 45-days for this purpose. You should not simply "cut loose" any of your existing patients who are beneficiaries under one of the state plans, because you could be subject to a potential lawsuit for abandonment of the patient if something should go wrong with that patient.

It would be a good idea to send a certified letter to each of your existing state patients as early as possible, informing them that you will no longer be able to treat them after the 45-day period has expired, to give them time to find alternative care.

Question 5: What if I have decided not to treat any state patients, but I come upon an accident scene and provide emergency medical services, or my hospital staff privileges require me to provide on-call services to a beneficiary of a state plan?

The legislation states that, if a physician renders health care services to a beneficiary of one of the state plans in what is termed "an imminent, life-threatening medical or surgical emergency," that physician is not then required to provide services to all other beneficiaries of the state plans (unless the physician has decided to provide such services anyway); nor is the physician limited to the maximum fee permitted by the plan for the provision of those emergency services. However, this exception is very limited in scope, and lapses as soon as the patient is stabilized.

There is a similar exception which states that a physician shall not be deemed to have agreed to deliver services to all beneficiaries of all state programs simply because the physician sees a patient who is a beneficiary of one of the state plans in connection with that physician's duties as an on-call staff physician. Again, however, this exception is limited to services provided while the physician is on call; any follow-up which the physician would do in his private office would then constitute an agreement to treat all state patients.

Therefore, in either an emergency or an on-call situation, if you have otherwise decided that you are not going to treat any state patients, you must stop seeing that patient as soon as the patient is stabilized, in the case of an emergency, or as soon as you are no longer on call and obligated by your hospital staff privileges to see such patient. Otherwise, you will be deemed to have agreed to be subject to the provisions of the legislation. Unfortunately, this requirement may have implications in the area of professional malpractice which the bill does not address; the best you can do in such a situation is to make it perfectly clear to the patient why you cannot see him or her any longer, and to do your best to see that someone else takes over the care of that patient.

With respect to your on-call obligations, if you are in a position where you can negotiate a "hold harmless" agreement with your hospital for this type of situation, that may help minimize your exposure.

Question 6: Can I enter into a private agreement with my patients who are beneficiaries of state plans, and agree to treat them only if they will not request reimbursement from the state plan, and thereby avoid the scope of the legislation?

The legislation is ambiguous on this question and therefore, unless and until clarified by rules and

regulations, I recommend that no physician enter into such an agreement with a patient. The provision in the legislation which requires a physician providing health care services to a beneficiary of one of the state plans to provide services to beneficiaries of all state plans would seem to permit such an agreement, because the requirement is phrased in terms of a physician providing health care services to any beneficiary of a plan, "the charges for which shall be paid by or reimbursed by any department or division which participates in a plan or plans as described in this section." This suggests that, if a physician provides health care services and the charge for those services is not paid or reimbursed by the state department, but rather is paid directly by the patient without any claim for reimbursement being made against the patient's insurance, then the physician would be outside the scope of this section and would not be required to provide services to other state beneficiaries.

However, the section which prohibits balance billing the patient for the difference between what the state agency will pay and the physician's usual charge unequivocally states that the agreement by a physician to deliver services to a beneficiary of a state plan shall be deemed to include also an agreement by that physician to accept assignment by the beneficiary of the beneficiary's rights under his state plan, and to accept as payment in full for the delivery of such services the amount specified in the plan. The section further states that in such instances the physician *must* bill the state or such other appropriate person directly for such services, and *cannot* bill the beneficiary for such services other than for deductibles or other payments which are specified in the plan itself. This section therefore seems to negate any potential flexibility which is implied in the previously discussed section. Finally, another provision in the bill provides for civil penalties against any health care provider who knowingly violates any provision of this legislation, with the maximum civil fine set at $25,000.00.

In light of the conflicting sections in the legislation, and particularly in light of the potential for civil penalties against a health care provider, I believe it would be unwise for any physician to try to exclude himself or herself from the scope of this Act by entering into a private agreement with a patient in which the patient agrees that he or she will be solely responsible for any charges by the physician and will not submit a claim for reimbursement to his or her state insurance plan. The physician would always run the risk of the patient changing his or her mind and later submitting a claim, therefore bringing the fact of the agreement to the attention of the state agency, which could result in civil penalties being assessed.

There are some indications that it may not have been the intention of the administration to forbid such agreements between physicians who do not wish to treat state patients under the terms of the Act, and patients who feel so strongly that they want to see that physician that they are willing to bear the entire financial burden of it. Nevertheless, it is still my opinion, due to the current ambiguities in the Act, that if you enter into such an agreement you expose yourself to potential charges that you have intentionally violated the Act, and what you must realize is that the civil penalties only apply to you, not to your patients. Therefore, unless and until clarified or permitted by rules and regulation, I believe such agreements should not be utilized as a means of excluding yourself from the scope of the legislation.

Question 7: What if a patient has coverage from both a state plan and from a private insurer? Can I treat the patient and charge my usual fee to the private insurer, without coming under the scope of the act?

Again, the legislation is unclear on this point, and caution should be taken in any such situation, particularly if you have otherwise decided that you do not want to treat any state patients. If the private insurance is clearly the primary insurance for the patient, then you should be able to treat the patient legitimately and charge your usual fee, either directly to the insurer or to the patient for reimbursement by the private insurer; however, it would be advisable to obtain a signed statement from the patient stating that the patient will only file a claim for reimbursement of the services with the private insurer, and not with the state plan. If the patient is unwilling to sign such a statement, then at least you should obtain a signed statement from the patient stating that the private insurance will be the primary insurance against which the patient will claim reimbursement. I do not believe that it is the intention of this legislation to preclude a physician from treating a patient and assuming that the insurance coverage for those services will be from a private source rather than the state, if the patient so informs the physician.

This is an area which needs clarification in rules and regulations; however, I believe any regulations promulgated in this area should permit some sort of arrangement where a physician could treat a patient with dual coverage and not be considered to have agreed to take all state patients. Another related issue which hopefully also will be clarified in rules and regulations is how the cap on amounts which the state will pay will be applied to physicians who do treat state patients, in the case of dual coverage from both a state plan and a private source. The answer to this question is unclear at the present time.

Question 8: If I decide that I do want to treat state patients, exactly how many Medicaid patients do I have to see? Do I have to "bump" my paying patients to make room for Medicaid patients? Do I have to actively recruit Medicaid patients?

The primary thrust of the so-called "take one, take all" provision in the legislation is to improve access to health care for Medicaid patients; in recognition of this intended purpose, and to address concerns expressed by some physicians that their practice not be over-burdened with Medicaid patients, a proviso was added to the "take one, take

all" section which states that a physician shall be deemed to have satisfied the requirement that he or she treat beneficiaries of all state plans if the physician "actually delivers health care services to all such patients who request such services," or if the physician "actually delivers health care services to at least a sufficient number of patients who are beneficiaries under the state's Medicaid program to equate to at least 15 per cent of the health care provider's total patient population." W. Va. Code 16-29D-3(e).

What this proviso means is that, as long as Medicaid patients compromise at least 15 per cent of your total patient population, you may turn away additional Medicaid patients and still be in compliance with the legislation. If you do not turn away *any* Medicaid patients you are also in compliance with the legislation, and you do not need to worry about what percentage of your patient population they comprise. You do not need to actively recruit Medicaid patients to your practice; however, if Medicaid patients come to you seeking services and you do not already have 15 per cent of your total patient population consisting of Medicaid patients, you will need to make some accommodation in your practice to see those patients. This does not necessarily mean that you will need to cancel existing appointments with your paying patients, but may mean that your paying patients, like your Medicaid patients, will have to wait longer before they can get in to see you for an appointment.

Enforcing this 15-per cent Medicaid requirement may be a problem, and it is not perfectly clear who will have the burden of proof in establishing that a physician is satisfying the requirement, although it is likely that that burden will be placed upon the physician if and when the question arises. Any efforts to enforce this provision will most likely be the result of a complaint made by a Medicaid patient that he or she tried to get in to see you and was turned away. Again, if you do not turn away Medicaid patients, you do not need to worry about any of the record-keeping requirements; if you do choose to turn away Medicaid patients, however, you should maintain adequate records in your office to establish that you satisfy the 15-per-cent-of-total-patient-population requirement. It is also unclear whether "total patient population" should be measured strictly in terms of patients or in terms of patient days or patient visits; if you believe patient days or patient visits would be a more equitable measure, you may wish to communicate your thoughts in this regard. (See Question 19 about how you can have input into the content of rules and regulations on this issue.)

Interestingly, although it may not be the intention of the legislation, the 15-per cent Medicaid proviso which was added to new Code 16-29D-3(e) literally states that, as long as 15 per cent of a physician's total patient population is Medicaid patients, that physician shall be deemed to have satisfied the requirements of the "take one, take all" provision regardless of whether that physician in fact sees beneficiaries of all the other state plans. Therefore, a physician conceivably could see PEIA patients and Medicaid patients, in the latter case satisfying the 15-per cent test, but refuse to see Workers' Compensation patients. I urge caution to any physician who chooses to interpret it in this manner, however, because such an interpretation may not withstand scrutiny.

Question 9: I already see a significant number of Medicaid patients from the neighboring states; can I include those patients in my calculations to satisfy the 15-per cent test?

Unless the rules or regulations state differently, you cannot count any out-of-state Medicaid patients toward your 15-per cent Medicaid requirement. This is because the 15-per cent requirement is phrased in terms of treating patients "who are beneficiaries under the *state's* Medicaid program." W.Va. Code 16-29D-3(e). The reference to "state" means West Virginia, so the statute appears to limit inclusion in the 15 per cent to only beneficiaries of the West Virginia Medicaid program.

Because this interpretation might well be inequitable to physicians who practice along the borders of West Virginia and who see Medicaid patients from other states, it is possible that the state agencies may provide some relief to physicians who see out-of-state patients either by reducing their percentage of West Virginia Medicaid patients or by somehow giving a credit against that percentage for out-of-state Medicaid patients. Again, however, unless and until that happens, the language of the statute would suggest that only West Virginia Medicaid patients can be counted toward the 15-per cent requirement.

An interesting wrinkle to this question, which only further illustrates the problems of record keeping and enforceability discussed in the preceding question, is whether out-of-state Medicaid patients should be counted in the denominator of a physician's total patient population for purposes of determining the 15-per cent test, if they cannot be included in the numerator. I believe it would be a justifiable position to take to exclude out-of-state Medicaid patients from the denominator in calculating the 15 per cent if you interpret the statute to mean that they cannot be counted in the numerator, because otherwise including them in the denominator would only exacerbate the difficulty of the physician in reaching the 15-per cent requirement. Moreover, since out-of-state Medicaid patients are not the type of "paying" patient which a physician might intentionally see in lieu of a West Virginia Medicaid patient, there is no reason to include them in the denominator.

Question 10: Can I refuse to see Medicaid patients except on referrals from other physicians, even if I do not satisfy the 15-per cent test, and still be in compliance with the act?

If your practice is the type which generally requires referrals from other physicians, and it is your policy not to see any patient unless that patient is referred to you by another physician, then I do not believe you would be in violation of the Act if the referral requirement

was applied equally to Medicaid patients as well as to all other patients. In such a situation, as long as you accepted all Medicaid referrals to you, or at least accepted enough Medicaid referrals so that Medicaid patients comprised 15 per cent of your total patient population, I believe you would be in compliance with the intention of the Act. In other words, if you do not let paying patients simply walk into your office and demand an appointment, this legislation should not require you to permit Medicaid patients to walk in and demand an appointment.

Essentially, the thrust and intention of the "take one, take all" provision and the 15-per cent Medicaid requirement is to prevent Medicaid patients from being discriminated against or denied health care services because of the mere fact that they are Medicaid patients. If you require referrals from all patients before you will see them, you are not treating Medicaid patients any differently, and therefore you should still be in compliance with the Act as long as you either accept all Medicaid referrals or if at least 15 per cent of all of your referred patients are Medicaid patients. This question may also be clarified in rules and regulations, although I do not believe clarification is as necessary in this area as it is in some other areas.

Question 11: If I decide to treat state patients, what are the advantages to me of becoming a "PPO-Participating" provider?

The primary advantages to individual physicians of becoming a PPO participant are prompt payment for services directly from the PEIA, and a steady, if not increasing, volume of PEIA patients. (The PPO provisions in the Act only apply to the PEIA; however, if the PPO concept is successful for the PEIA, it is my understanding that other agencies, including possibly Workers Compensation, will utilize the PPO concept with the PEIA.) However, the purpose of including the PPO provisions in the compromise bill was to give some level of security to *all* physicians who treat state patients, by assuring a minimum level of reimbursement from the PEIA. Specifically, if an "acceptable" PPO contract is in force, the reimbursement to PPO participating physicians is initially set at no lower than the 80th percentile of the PEIA's 1988 calendar year experience in paying claims, and can be reduced to no lower than the 75th percentile of the PEIA's 1988 calendar year experience. Any reduction to the 75th percentile must be based on valid budgetary requirements dictated by physician claims, and must be after consultation with an advisory committee composed of a majority of health care providers.

In the absence of a PPO contract, the legislation gives the PEIA unlimited authority to set the rates of reimbursement wherever it chooses, using its own definition of "reasonable." In the absence of a PPO, therefore, a physician providing services to PEIA patients would have no real guarantee of any acceptable level of reimbursement from the PEIA, and the PEIA conceivably could set the rates of reimbursement in the absence of a PPO at a level significantly lower than the 80th percentile of its 1988 claims experience, with such reimbursement level fluctuating at the whim of the legislature in allocating a budget to the PEIA. Because the PEIA, under a PPO contract, has a floor below which it *cannot* lower rates of reimbursement, a degree of accountability is imposed upon the West Virginia Legislature to provide adequate funds to the PEIA in its budget or face the risk of significant shortfalls in the budget and the same type of payment crisis which has existed during the past year and is only now showing promise of being cured.

Before any physician can obtain the advantages of a PPO contract, however, there must be sufficient participation in a PPO contract to meet the definition of an "acceptable" PPO contract set forth in the legislation. The statutory definition of an acceptable PPO contract includes a requirement that the contract be entered into by July 1, 1989; that by July 1, 1989, the PPO include at least 70 per cent of the members of recognized specialities of health care providers in the applicable regions as defined by the eleven planning and development counsel regions authorized in the Code; and that by September 1, 1989, the PPO include at least 80 per cent of such health care providers among its members.

In computing these percentages, the denominator will exclude any physicians who have decided that they will not provide services to state beneficiaries at all, and will also exclude hospital-based physicians who do not bill separately for their services. Although the PEIA Director may waive these participation requirements if she determines that there is adequate access for PEIA members, her decision to waive these requirements is at her sole discretion, and should not be counted on in assuring an "acceptable" PPO contract.

An acceptable PPO contract also must include, by statute, provisions for utilization review and quality assurance programs which are satisfactory to the PEIA, a requirement that there shall be no balance billing of PEIA patients other than deductibles or co-payments which are authorized under the PEIA plan; and incentives to PEIA beneficiaries to use PPO participating providers, as well as incentives to physicians to become PPO participating providers.

Question 12: What are the disadvantages to me if I decide to treat state patients but do not join a PPO to do so?

If a significant number of physicians decide that they will treat state patients but will not join a PPO to do so, one of the disadvantages is that there will be no PPO which can meet the participation requirements of an "acceptable" PPO contract, so that all physicians who are treating state patients will then be subject to the unilateral fee-setting authority of the PEIA. If, however, enough physicians join an "acceptable" PPO contract, but you are not one of the PPO-participating providers, you are still subject to a maximum charge which you can make to a PEIA patient, which is tied to the rate of reimbursement set in the acceptable PPO contract.

Specifically, you as a non-PPO-participating physician would be permitted to charge up to 110 per cent of the 80th percentile of the PEIA's 1988 claims experience, which means that you would be permitted to charge slightly more than would PPO-participating physicians.

However, the PEIA has stated its intention not to reimburse directly non-PPO-participating physicians for any services provided to state patients; rather, the PEIA has stated that it will pay the patient directly, so that any non-PPO-participating physicians will have to collect their entire bill from the patient directly.

Secondly, the PEIA probably will reimburse for services rendered by non-PPO-participating physicians at a lower rate than it reimburses for PPO-participating physicians; therefore the patient will be facing a potentially significant out-of-pocket expense due to both a lower rate of reimbursement and a higher charge for the service. Because the PEIA patient will have to pay a larger amount of money out of his own pocket if he goes to a non-PPO-participating physician, PEIA patients will be more likely to select a PPO-participating provider to go to for health care services, so a non-PPO-participating provider may lose patient volume. The PEIA may include in its plan other incentives for its beneficiaries to go to PPO-participating providers, which also would act as additional incentives for physicians to become PPO-participants.

In addition, the legislation gives the Director of the PEIA discretion to subject a non-PPO-participating physician to the unilaterally-set maximum rates of reimbursement which would exist in the absence of an acceptable PPO contract if the Director determines that a beneficiary of the PEIA does not have access to a PPO-participating provider. This most likely would have application in some rural areas where the total number of providers available to PEIA patients is limited. In such instances, a non-PPO-participating physician would not even have the dubious benefit of being permitted to collect directly from the patient an amount somewhat in excess of what a PPO-participating physician can charge because the PEIA could simply override that provision and set a different, presumably lower, rate of reimbursement. It is unclear under the legislation exactly how the PEIA Director will utilize this authority, and this probably will have to be clarified in rules and regulations.

Another disadvantage to a non-PPO-participating provider is simply the red tape which the physician will have to go through in order to, first, discover exactly how much he or she is permitted to bill the patient, and secondly, to collect successfully such amount from the patient. In order for non-PPO-participating physicians to comply with the 110 per cent of the 80th percentile cap set upon their charges for services, they somehow will have to learn from the PEIA what that cap is. Although some ideas about how this information will be communicated to a physician have been discussed with the PEIA, the actual methodology has not been established and is unknown at this time. One possibility is that non-PPO-participating physicians will have to postpone billing a patient until they can ascertain from the PEIA what the proper amount is that can be billed.

Another possibility is that the non-PPO-participating physician will send out a bill to a patient, will later discover that his bill exceeded the maximum permissible amount, and will therefore have to adjust the bill, perhaps sending an explanation to the patient.

A third possibility is that a physician will simply receive a partial payment of his bill back from the patient, and will have to ascertain whether the less-than-full payment is due to the fact that his charge exceeded the maximum cap or the patient simply did not have enough money to pay the full amount. A non-PPO-participating physician will have to be extremely careful not to run afoul of the West Virginia consumer credit rules relating to debt collection efforts by trying to collect from a patient an amount which the patient does not owe.

Question 13: Do the provisions of this act affect how I can bill private insurance companies?

No. Although the original proposed legislation applied equally to private insurers and permitted them to set maximum fees which could be charged to their beneficiaries, those provisions were deleted from the final bill. Therefore, your current practices relating to billing private insurance companies should not be affected. However, you should realize that this legislation included resolutions passed by both houses calling for a study of the cost-shifting effects of this legislation upon private insurers; this could easily set the stage for demands from the private sector in the 1990 legislative session that they be given similar protections, if a great deal of cost-shifting has, in fact, taken place.

Question 14: Exactly how long will I be subject to having my charges for services to state beneficiaries set by the state agencies?

The state agencies' ability to set maximum amounts they will pay for health care services stays in the legislation until changed or removed by the Legislature; however, the prohibition on physicians billing state patients for the difference between their normal charge and maximum rate of reimbursement set by the state agencies expires by its own terms on June 30, 1991. This is known as a "sunset" provision. The advisory committee created by the legislation, which must be composed of a majority of health care providers, and the Director of the PEIA are required to report to the Governor and to the Legislature on or before January 1, 1991, on the impact of prohibiting balance billing upon the health care provider community, the public employees, and the PEIA.

Question 15: What if I originally decide that I do want to treat state patients, but then change my mind? Can I "opt out" of the legislation?

Yes. There is a specific provision in the legislation, in new Code

16-29D-3(h), which permits any physician who has been providing health care services to state beneficiaries under the legislation to withdraw from providing any further services. In order to withdraw, you must provide written notice of your withdrawal to the administrator of the PEIA. The section also includes a transition rule which permits you, once you have decided to stop treating state patients, to continue seeing any existing state patients for a period of not longer than 45 days after you have tendered your notice of withdrawal, without having to take on any new state patients. This permits you to wind down your existing patients and either complete their treatment or give them time to find a new physician, to avoid charges of abandonment by the patients, without continually having an obligation under the "take one, take all" provision to take on new state patients.

Question 16: If I am asked by other physicians what I plan to do now that this legislation has been passed, can I tell them? Can I discuss this legislation at my county medical society meeting?

If you wish to tell an inquiring physician (or anyone else, for that matter) what you plan to do in light of the passage of this legislation, you are certainly entitled to do so. What you cannot do, however, and what you should avoid the appearance of doing, is reach an agreement with one or more other physicians that none of you is going to treat state patients. This is because a specific provision in the legislation, new Code 16-29D-6(c), states that any agreement between two or more unrelated health care providers to refrain from delivering services to any person or persons, which delivery would otherwise be subject to the provisions of the Act, for the purpose or with the effect of defeating the purposes of this Act, shall be deemed to be a violation of the West Virginia antitrust laws.

If you practice in a partnership or in some other group, and the decision of the group whether or not to see state patients must be made as a group in order to be effective, this prohibition does not apply and you are permitted to discuss such a decision in that specific context. There is another exception to this "antitrust deemer" clause, also, which permits a physician on the staff of any hospital or other health care institution to discuss with such institution the fact that the physician will only consent to see state patients in connection with his or her duties as staff on-call physician, but will not see state patients in his private practice.

As far as discussing this legislation at county medical society meetings or at any other meeting of physicians is concerned, mere discussion is certainly not illegal, and discussions with the legitimate and express purpose of modifying or changing legislation are exempted from the application of antitrust laws because of constitutional principles, under what is referred to as the *Noerr—Pennington Doctrine.* However, caution should be taken at any such meeting to be certain that it does not leave an impression, whether justified or unjustified, that one or more physicians participating in that discussion are agreeing to a course of action which would be in violation of the antitrust laws.

Question 17: Is it true that the legislation provides free malpractice coverage to physicians providing obstetric care to Medicaid patients?

Yes, it is true that the legislation by its terms requires the State Board of Risk and Insurance Management to provide appropriate professional or other liability insurance for any medical practitioners who provide obstetric treatment to patients which is reimbursed or reimbursable by state Medicaid funds. The legislation leaves the amount of such coverage up to the State Board, but requires that it provide a minimum amount of coverage of $1,000,000 per occurrence.

Exactly how the State Board will accomplish what is required of it by this legislation is less than clear, however. Such insurance coverage can only cover claims, demands, actions, suits or judgments by reason of alleged negligence *in the course of providing such obstetric treatment.* In other words, it will not be blanket coverage for any alleged act of negligence by the physician in any area of his or her practice, but is required by the legislation to be expressly limited to obstetric treatment rendered to Medicaid patients. It is also unclear exactly how physicians who desire to obtain such coverage will make their request to the State Board and obtain the coverage. Finally, there is no guarantee in the legislation that the physician will actually receive any monetary benefit from the provision of this coverage because nothing in the legislation requires a malpractice carrier to give a physician the benefit of such "free" coverage through a reduction in premiums.

Therefore, although in theory the provision of free malpractice coverage sounds good, in reality it may not be of much value to a physician providing obstetric care to Medicaid patients. If the State Board of Risk and Insurance Management is able to implement this part of the legislation, and if the West Virginia Insurance Commissioner is made aware of the existence of such coverage, it is possible that the Insurance Commissioner might be able to require malpractice carriers to give some benefit to their insureds as a result of the provision of this coverage; it probably would take a number of complaints from physicians to the Insurance Commissioner, however, to trigger any real action.

Question 18: How will this legislation affect my relationship with the hospitals in which I practice, and with any other entities with which I might have contractual agreements (such as HMOs)?

If your hospital or other contractual relationships require you to see state patients, and you also have a private practice in which you have decided that you will not see state patients, you will need to examine your contractual relationships very closely. As indicated earlier, the legislation specifically permits physicians to discuss with hospitals where they have on-call staff responsibilities the fact that the physician will only see state patients in connection with his or her on-call staff responsibilities, but will

not see them in his or her private practice. The legislation further provides that when a physician sees a state patient in an on-call staff situation, that alone shall not deem a physician to have agreed to see all beneficiaries of state plans in such physician's private office or practice.

This latter exception refers to a physician seeing a patient in connection with the physician's duties as an "on-call staff physician." However, it is not limited to physicians who are on the staff of hospitals, but also includes physicians on the staff of any "other health care institution." Therefore, although a physician under contract with an HMO would not necessarily be "on call" when he saw patients pursuant to his contract with the HMO, I believe the intention of this proviso would be to make any treatments rendered to state beneficiaries solely as a result of a staff physician's contractual obligations to a health care institution, such as an HMO, not constitute an agreement by that physician to see state patients in his private practice, unless the physician had otherwise decided that he wished to see state patients in his private practice.

In any event, if you have contractual or other obligations with hospitals, HMOs, or other health care institutions which may require you to provide health care services to beneficiaries of the state programs, and you have decided in your private practice that you do not wish to see state patients, you should at the very least communicate your intention in that regard to the hospital, HMO or other health care institution. You should also follow the recommended procedures set forth in response to Question 4 to make clear that you are not seeing state patients in your private practice. You may want to try and obtain a "hold harmless" agreement from the health care institution to protect you when you decline to follow up with state patients, as suggested in response to Question 5.

If the health care institutions with whom you have contractual or other obligations cannot accept your decision not to see state patients in your private practice, then you will have to evaluate whether you wish to continue in that contractual relationship in light of this legislation.

Question 19: What can I do if I see problems in the way this legislation is implemented, or if I have ideas about how its implementation can be improved? Can I have input into the process?

There are several avenues through which you can have input into the implementation of this legislation and also into the development of rules and regulations to assist in the implementation of this legislation. First, the legislation establishes an advisory committee whose members will be appointed by the Governor — a majority of whom must be health care providers or representatives of health care providers—to advise and assist in the establishment of reasonable payment methods, schedules or rates of reimbursement, and so on. This advisory committee is the same committee which must be consulted by the PEIA before it can reduce the maximum rate of reimbursement in an approved PPO contract below the 80th percentile. It is quite possible that the state agencies also will take advantage of this advisory committee, once it is established, for assistance in developing rules and regulations. Therefore, once this advisory committee is established it would be an appropriate place to voice any questions, concerns, problems or possible solutions which you see in the implementation of this legislation. Because this advisory committee is required by law to be composed of a majority of health care providers or their representatives, you quite likely would get a sympathetic ear. Although it has no binding authority on the state agencies, it will be in a position to have some direct input.

Secondly, you can have input into the implementation process through legislative rule-making procedures. With the exception of any specific schedules or tables of rates of reimbursement which may developed by the state agencies, the procedures which the agencies will utilize to develop such schedules of rates are subject to the legislative rule-making procedures of the State Administrative Procedures Act, as are any other rules and regulations which are developed by the Department of Health and Human Resources, the agency charged with promulgating rules to carry out the provisions of this legislation. The legislative rule-making procedures include opportunities for public hearings and comment on any proposed rules and regulations by any interested parties. Therefore, this is another avenue where you could have input.

Finally, although the membership of the advisory committee is to be appointed by the Governor, Governor Caperton has indicated his interest in receiving suggestions as to whom those appointees should be. If you are sufficiently interested in having input into the implementation process that you would like to be considered as an appointee to the advisory committee, you might wish to consider offering your services for that purpose to the administration.

Conclusion

These are but a small sampling of the many questions which have or will arise as a result of the passage of Senate Bill 576. As indicated earlier, there are many areas in this legislation which will need to be addressed, clarified, and/or fleshed out in rules and regulations. My effort here has been to give a brief overview of what this legislation will do, to point out some of the areas which we know will require clarification, and to invite each of you who see other areas where clarification will be necessary to communicate that information to someone so that it can be addressed.

In order for the quality of health care in West Virginia not to decline dramatically, I believe the state and the health care community must work together in implementing and living with this most significant legislation as long as it remains part of the law in West Virginia.

President's Page

"At present there are approximately 17 states that are in the process of changing their system of payment for health care or are implementing cost containment controls similar to those imposed in our state."

17 States Changing Payment for Health Care

I just recently returned from visiting Ohio State Medical Association's Annual Meeting in Dayton. I find it very interesting to contrast their association with WVSMA. We have approximately two million people in our state with 2,600 practicing physicians, of whom 2,200 are members of our state Association. Ohio has approximately 20 million people with 24,000 physicians, and 21,000 are members of their state association. The Ohio physicians face the same types of problems that we here in our small state face. They were very much interested in the recent cost containment legislation (SB-576) that was passed in our state; they too have similar types of bills being introduced into their legislature.

One of the bills that was recently introduced requires mandatory participation and assignment in Medicare and state programs which are tied to licensure similar to the Massachusetts law. The other bill of concern is the Universal Health Insurance for Ohio Act (UHIO). This bill would be similar to the Canadian plan except it would only involve Ohio Citizens. With this plan, all private health insurance would be phased out over a three-year period. A trust fund would be set up to administer and pay for all health care in the state, and this would be called "The Ohio Health Care Trust Fund." The fund would be financed by an eight-percent payroll tax on employers, a one-percent payroll tax on employees, a two-per cent tax on interest and dividends, and a 10-per cent excise tax on tobacco, alcohol and other "harmful substances." In addition, the state would petition the federal government for waivers to place Medicare and Medicaid monies also into the trust fund. The program would be administered by a 15-member board, 10 of whom would be consumers, and five, providers—all appointed by the governor. All phases of medical care from preventive medicine to new construction and technology would be under the control of this board.

At present there are approximately 17 states that are in the process of changing their system of payment for health care or are implementing cost containment controls similar to those imposed in our state. These laws all have the same goal, and that is "cost containment." That was the goal of the legislation that was passed in West Virginia. The need for this legislation was so strong that the governor was willing to "twist arms" and even bring the Legislature back in special session, if necessary, to get cost control had the bill not been enacted.

This again is an example of the need for all physicians to be a part of organized medicine on all three levels: local, state and national. Next January, we will be looking very carefully at SB-576 for any modifications that can be enacted and, when the law sunsets in 1991, we expect to have definite, long-range plans to prevent a replay of the recent past.

—Bill M. Atkinson, M.D.

It Was All a Lie

We might as well confess. There is no use in hiding it any longer. We have been conspirators . . . knowing conspirators in promoting and spreading the fallacy that in the United States today there exists just one level of medical care. It's a lie and it has been a lie.

It must have been during the time of the struggle over the initiation of Medicare that the deceit began. Opposition to the King-Anderson bill was the then current preoccupation in Medicine. We didn't need government Medicine for anyone because we all got the same regardless of age or circumstances.

Maybe it was even true in those days. Maybe it wasn't a lie. Who can remember? So much has changed, and not much for the better. Certainly, most of the other things we said were true . . . we can't afford it . . . the costs will be staggering . . . we shouldn't pay taxes to take care of people who can afford to take care of themselves . . . .

Even if it wasn't true that there was just one level of care in those days, it's a lot less true today. We used to worry and fret about the possibility of two levels of care . . . a two-tiered system . . . how unfair, how awful, discriminatory, undemocratic!

We have multiple levels of care now. Medicine, once a smorgasbord of wonders, now is more like a cafeteria. There are health systems and methods of selecting benefits referred to and named after the cafeteria style of picking this benefit and that. Another useful metaphor is the department store imagery with shopping available from the Bargain Basement up to the Penthouse Shoppe.

Isn't it amazing the number of people in the Medical Bargain Basement, certain they are in the Penthouse Shoppe? It is nothing new to say that you get just what you pay for. Without a doubt that has always been true.

There is nothing wrong with shopping in the Bargain Basement and there is nothing really wrong with HMO or PPO medicine. Nurse practitioners are fine at some tasks, and physician assistants can many times play a useful role. Most generic drugs are almost as good as those for which they substitute. Mental health centers will give you someone you can talk to and, in West Virginia, doctors can be intimidated into treating you even if they don't want to.

And then, there is another kind of Medicine. It's sort of old fashioned—real doctors and all that. They talk to you, frequently listen to you too. They know it is their job to get the best and the most out of the medical care system for you.

Their responsibility is strictly to you, not to some fund or to some insurance company. They won't be paid a bonus if they hold down the costs by holding back your benefits. Neither will they be fined for allowing the cost of your personal benefits to get too high. They will help you to get everything that fancy brochure promised when you signed up for your particular plan and started paying your premiums.

There are medical care systems and medical plans and third-party payors. There are levels of care within layers of care, and a good many are not what they seem to be.

Yes, in retrospect, it's all been a lie but it was the kind of lie strongly resembling a wish . . . "Sure, boys, we're going to get out there in the second half and win! We're only 40 points behind . . . " We kept saying that it was so because we wanted it to be so.

We have to stop repeating that lie about one level of care and just give them what they pay for.—SDW

Our Readers Speak

Editorial 'Great'

Bravo! Bravo! Bravo!

The May editorial, "Enough," was simply great.

William P. McDonald, D.C.
Suite 100
114 Washington Street West
Charleston, WV 25302

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications to this Journal for publication. The author shall be held entirely responsible. Editorials printed in The Journal do not necessarily reflect the official position of the West Virginia State Medical Association.

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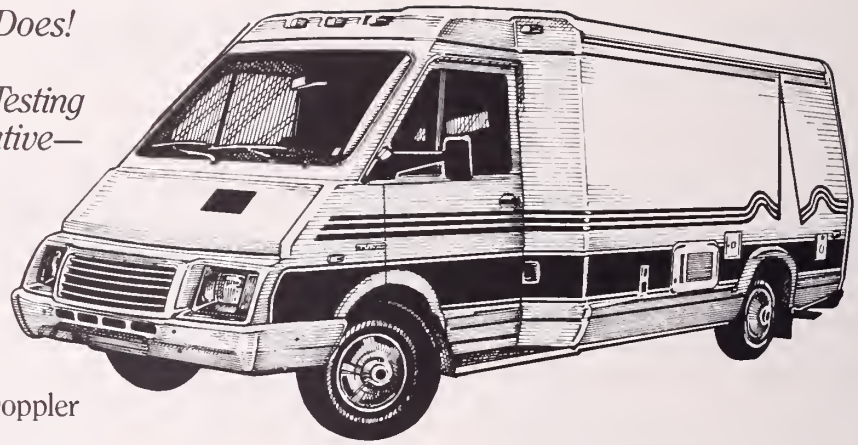

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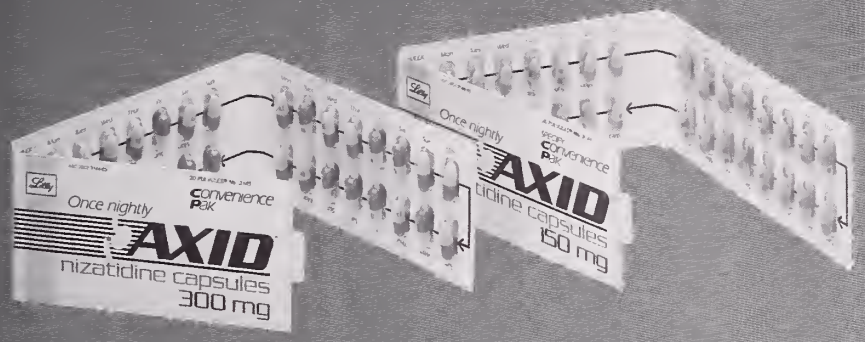

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1. Data on file, Lilly Research Laboratories.

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AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 60 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

Annual Meeting Paper

Campylobacter pylori: Gastritis, Peptic Ulcers

"The Role of Campylobacter pylori in Gastritis and Peptic Ulcer Disease" will be the title of a paper to be presented by T. Ulf Westblom, M.D., of Huntington during the WVSMA Annual Meeting. Doctor Westblom, Assistant Professor of Medicine, Section of Infectious Diseases at Marshall University School of Medicine, will speak during the Saturday morning, August 19, scientific session.

The convention will be held August 16-19 at the Greenbrier, beginning Wednesday afternoon, August 16, with the opening session of the House of Delegates.

Also scheduled Saturday, as announced previously, will be a paper on "Magnetic Resonance Imaging," by E. Ralph Heinz, M.D., of Durham, North Carolina, and a talk on disease prevention.

Scientific sessions also will be held Thursday and Friday mornings.

The convention program also will include a keynote address Thursday morning, section and specialty society meetings primarily on Friday, and the second House session Saturday afternoon. A presentation on computer diagnostics is being planned for Friday afternoon. Social and other convention activities will be announced.

Sweden Native

Doctor Westblom, a native of Sweden, conducts his major research in the area covered by his convention paper. At MU he also is Co-Director, Introduction to Clinical Medicine, second-year medical school curriculum.

He received his undergraduate and M.D. (1978) degrees from Karolinska Institute in Stockholm, and completed an internship/residency and specialty training there and at Kalmar (Sweden) Hospital. In this country, he completed additional postgraduate work at the University of Missouri in 1981-1986, joining the MU faculty in 1986.

Certified by the American Board of Internal Medicine, Doctor Westblom was inducted into the Outstanding Teacher Honorary Society by the senior MU medical student class in 1987.

He is Chairman of the Research Safety Subcommittee, Research and Development Committee, Veterans Administration Medical Center, Huntington.

Doctor Westblom is the author or co-author of nine scientific abstracts and 20 articles.

Other Speakers

As announced earlier, Rufus K. Broadaway, M.D., of Miami, Florida, will address the first session of the House. An AMA trustee, Doctor Broadaway is Senior Vice President of Medical Affairs at Cedars Medical Center in Miami. The title of his address will be "Quality Initiatives on Two Fronts." He'll be speaking in the place of the current AMA President Elect, Alan R. Nelson, M.D., who will be out of the country at that time. Doctor Nelson will be installed as AMA President this month.

Some of the new officers elected at the Scientific Assembly of the West Virginia Chapter, American Academy of Family Physicians this spring are, front row, from left, Drs. John Beane, Parkersburg, President Elect; Jose I. Ricard, Huntington, Chairman of the Board; L. Dale Simmons, Clarksburg, AAFP Delegate, and John Fullmer, Morgantown, AAFP Alternate Delegate; back row, from left, Drs. William L. Harris, Charleston, District VII Board Member; David Avery, Vienna, District IV Board member; Harvey Reisenweber, Martinsburg, District III Board member; Joseph A. Smith, Dunbar, Treasurer; and John V. Merrifield, Dunbar, Vice President. (See story on Page 253.)

Other speakers and topics announced earlier are:

Friday: "Lyme Disease: The Latest Great Imitator," Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, WVU Health Sciences Center, Morgantown; "External Influences on the Practice of Medicine," Robert W. Cantrell, M.D., Fitzhugh Professor and Chairman, Department of Otolaryngology-Head and Neck Surgery, University of Virginia; and "Allergy-Free, Non-Toxic Environment: The Effect of the Built Environment on Our Health," Robert J. Kobet, AIA, Butler, Pennsylvania.

Members of the 1989 Annual Meeting Program Committee are Drs. Michael J. Lewis, Morgantown, Chairman; James L. Bryant, Clarksburg; C. Richard Daniel, Beckley; Derrick L. Latos, Wheeling; Michael A. Morehead, Parkersburg; Maurice A. Mufson, Huntington, and Stephen L. Sebert, Lewisburg.

Other officers elected were: President Elect, John E. Beane, M.D., Parkersburg; Vice President, John V. Merrifield, M.D., Dunbar, and Secretary, Michael J. Lewis, M.D., Morgantown.

Joseph A. Smith, M.D., Dunbar, was re-elected Treasurer.

Drs. Dennis Saver, Newburg; Harvey Reisenweber, Martinsburg, and William L. Harris, Charleston, were elected to three-year terms on the Board of Directors. David W. Avery, M.D., Vienna, was re-elected to a three-year term.

Chamberlain AAFP's 1989 "Mister Doc"

Robert L. Chamberlain, M.D., Buckhannon, with his "Mister Doc" Award during the 37th annual Scientific Assembly of the West Virginia Academy of Family Physicians in Morgantown in April.

Robert L. Chamberlain, M.D., a Buckhannon family physician since 1948, has received the highest possible recognition by the West Virginia Academy of Family Physicians.

Doctor Chamberlain received the 1989 Mister Doc Award at the Academy's 37th annual scientific assembly held in April in Morgantown.

The Mister Doc Award honors each year a physician who has earn ed the respect of his patients and colleagues.

Doctor Chamberlain is a graduate of West Virginia Wesleyan, West Virginia University Medical School and the Medical College of Virginia.

During his career, Doctor Chamberlain delivered 2,489 babies, including the first birth at the new St. Joseph's Hospital in 1966. He also delivered the first baby in that hospital's new birthing room in 1988.

Doctor Chamberlain is a member of the Upshur County Board of Education. He has been named both Citizen of the Year and Boss of the Year in Buckhannon. Formerly a member of the WVAAFP Board of Directors, Doctor Chamberlain served as Secretary of the Central West Virginia Medical Society for more than 10 years.

He and his wife, Sarah Elizabeth (Sally), are the parents of Rick, a social worker in Clarksburg; Steve, a Grand Island, New York, businessman; Betsy, a television account executive in San Diego; Carol Beth Hodgkiss, a Cornado Island, California, housewife, and Mary Ann Marner, secretary for the Presbyterian Church in Cornado Island.

Sine Elected President

Wilbur Z. Sine, M.D., of Morgantown was elected WVAAFP President. Doctor Sine, who has practiced in Mortantown for 10 years, is a graduate of Fairmont State College and WVU School of Medicine.

Jose I. Ricard, M.D., of Huntington, who served as WVAAFP President in 1988-89, was elected Chairman of the Board.

AIDS Reporting Steps Outlined

West Virginia physicians and hospitals (infection control practitioners) are required to report ARC and AIDS cases as soon after diagnosis as possible, the state Department of Health has reminded.

"Timely reporting is essential and required by West Virginia law," said a spokesperson from the Division of Surveillance and Disease Control.

AIDS reporting responsibilities and procedures include:

—Reporting of AIDS using the CDC form that is available through the AIDS Surveillance Office

—Using the NEW reporting card available through the AIDS Surveillance Office

—Mailing reports to the AIDS Surveillance Program at the following address: Loretta E.Haddy, Acting Director; West Virginia Department of Health, Division of Surveillance and Disease Control, 151 11th Avenue, South Charleston, WV 25303.Include on the envelope: "To Be Opened by Addressee Only."

For more forms for reporting AIDS, ARC and HIV antibody reactives, or educational brochures used in patient counseling, call the AIDS Surveillance Program office during regular business hours at (304) 348-5385 or 1-800-423-1271.

It should be noted that HIV/AIDS contact notification and counseling assistance are available. For service call 1-800-642-8244 or 348-2950. Laboratories handling HIV specimens also must submit reports to the Department of Health. For information call 1-800-642-8244.

WVSMA Delegation To Attend AMA Annual Meeting

John B. Markey, M.D.

Joseph A. Smith, M.D.

Stephen D. Ward, M.D.

The annual meeting of the American Medical Association's House of Delegates will be held June 18-22 at the Chicago Hilton & Towers Hotel.

Issues expected to be addressed include Medicare, professional liability, peer review, long-term care, and a host of health-related issues being discussed or considered on the federal level.

WVSMA's three delegates to the AMA House are John B. Markey, M.D., of Charleston, Joseph A. Smith, M.D., of Dunbar, and Stephen D. Ward, M.D., of Wheeling.

Alternate Delegates are Drs. David Z. Morgan, Morgantown, and Carl J. Roncaglione, South Charleston. WVSMA President Bill M. Atkinson was appointed by Council to serve as the third Alternate Delegate in the place of Doctor Ward, previous Alternate Delegate who was elected to Delegate.*

Also representing WVSMA will be the Council Chairman, Cordell De La Pena, M.D.; Derrick Latos, M.D., President Elect; Michael Stump, M.D., Vice President, and Stephen Sebert, M.D., and David Avery, M.D., as Delegate and Alternate Delegate, respectively, of the AMA Young Physicians Section.

Frank J. Holroyd, M.D., of Princeton, who served for 32 years as a West Virginia AMA Delegate, is an Honorary Delegate.

The AMA House is composed of 433 delegates representing state medical associations, national medical specialty societies, residents, medical students, medical schools, hospital medical staffs, young physicians, the armed services, Public Health Service, and Veterans Administration.

Doctor Ward will also serve on Reference Committee E (Scientific-Public Health).

Albert J. Osbahr, M.D., of Huntington is a member of the AMA Council on Medical Service, and is up for re-election to his seat on this key AMA council.

Executive Director Mert Scholten will provide staff support and services for the WVSMA delegation. Dee Crabtree, Director of the WVSMA Auxiliary, will staff the Auxiliary delegation at its concurrent meeting.

While in Chicago for this annual event, the WVSMA representatives have scheduled a Saturday meeting with CNA, the WVSMA-sponsored professional liability insurer, to discuss the 1990 plan renewal and possibility of a further rate decrease for next year.

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*As reported previously, Council has made a recommendation to the Bylaws Committee for future WVSMA presidents to serve as an AMA Alternate Delegate.

More than 100 physicians and others attended the West Virginia Urological Spring Seminar in Huntington April 1-2. Shown with the immediate Past President, Rocco A. Morabito, M.D., Huntington, left, are, from left, some of the guest speakers: Drs. Charles B. Brendler, Johns Hopkins; Willet F. Whitmore, Jr., Memorial Sloan-Kettering Cancer Center; Jay Y. Gillenwater, University of Virginia, and Henry A. Wise II, Ohio State University. Discussion included updates on carcinoma of the prostate gland, medical management of benign prostatic hyperplasia, and lithotripsy.

Poetry Corner

War

Step by step he slowly walked
Along the coral beach
And gazed across the ocean wide
As far as sight would reach.

And thinking of his far-off home
Across the widespread sea,
He wondered if he e're again
Would see his family.

As thoughts of home raced through his mind,
A fleeting smile was seen
To briefly cross his careworn face,
Grown old for just eighteen.

Then, planes were flying overhead,
And bombs began to fall;
As on the ocean, ships appeared
Behind a gunsmoke pall.

And soon the landing craft were seen,
As drawing near the shore,
Disgorged ten thousand well-armed men,
And then, ten thousand more.

So war had come to this small isle
Which just the day before
Had been a peaceful paradise
With sunbathed coral shore.

And on its beaches, blood ran red
As many men were killed;
Among them one just eighteen years
Whose thoughts of home were stilled.

It matters not which nation his,
But only that he died,
As many do in every war;
For wars respect no side.

So just one plea for this young man
Who died before his prime;
Please, God, all nations of the world
Stop war while there is still time.

E. Leon Linger, M.D.
Buckhannon

Omaha Beach Revisited

This is our Flanders Field,
This Normandy cliff where thousands sleep.
My age they were when they died,
And I lived.
And like the stunted pines
That border the level fields of white markers,
Though forty years have passed,
They have not changed.
I cannot think of them as my age now,
But red-cheeked youths
Who but for ill chance of fate
Could be the visitor to these graves.

The first Flanders-
To make the world safe for democracy,
This one-
To stop tyranny,
There will not be another.

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

Ophthalmology Meet

The West Virginia University Department of Ophthalmology will hold its tenth annual Ophthalmology Conference September 22-23 at Sheraton Lakeview Resort and Conference Center in Morgantown. Frederick T. Fraunfelder, M.D., Professor and Chairman of the Department of Ophthalmology at University of Oregon Health Sciences Center, will be featured as the Hutchinson Lecturer. CME credit is provided. For additional information, contact: Department of Ophthalmology, West Virginia University School of Medicine, Morgantown, WV 26506, (304) 293-3757.

Medical Meetings

June

9-11—Wilderness Medicine Seminar (Am. College of Emergency Physicians, WV Chapter), Charleston.

13-16—Society of Nuclear Medicine, St. Louis.

18-22—AMA Annual Meeting, Chicago.

18-22—International Conference on Preventive Cardiology (2nd), Washington, DC.

20-21—Society of Vascular Surgery, New York.

22-25—Am. Academy of Pediatrics, Sea Island, GA.

July

16-22—10th World Medicine Games, Montreal.

25-29—Assoc. of Philippine Physicians in America, St. Louis, Mo.

August

16-20—122nd Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

18-21—Am. Academy of Family Physicians, Los Angeles.

21-23—Am. Academy of Facial Plastic & Reconstructive Surgery, New Orleans.

21-23—Assoc. of Am. Physicians & Surgeons, Orlando, Fla.

24-27—Am. Neurological Assoc., New Orleans.

October

15-20—Am. College of Surgeons, Atlanta.

19-22—Am. Society of Internal Medicine, Washington, D.C.

November

5-8—Southern Medical Assoc., Washington, D.C.

December

3-6—AMA Interim Meeting, Honolulu.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—June 22, Skin Cancer, Donald Farmer, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—June 1, Carcinoma of the Prostate, Donald L. Lamm, M.D.

June 9, Adult Reconstructive Surgery: Joint Replacement & Osteotomy Surgery, J. David Blaha, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—June 8 (tba)

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—June 21, Shoulder Pain—Diagnosis & Treatment, Eric Radin, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—June (no program)

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—June 7 (tba)

Grantsville • Calhoun General Hospital, 1 P.M.—June 12, Update on Regional Resources for Neonatal Care, Dale Landes, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—June 15, Reconstructive Surgery, Hans Lee, M.D.

Logan, • General Hospital, 11:30 A.M.—June (no program)

Madison, ☐ Boone Memorial Hospital, 7 P.M.—June 13, Organ Donors & Transplants, Ernest Hodge, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—June 20, MRI Update, E. Tanguilig, M.D.

Martinsburg, ★ V.A. Medical Center, 2 P.M.—June (no program)

Montgomery, • General Hospital, 12 P.M.—June 14, Laser Angioplasty, George Abela, M.D., University of Florida.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—June 8, Rocky Mountain Spotted Fever, Melanie Fisher, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—June 8, Lyme Disease of Ticks & Titres, Norman Ferrari, M.D.

Parkersburg, ★ Camden-Clark Hospital 7 A.M.—June 14, Comprehensive Evaluation of the Older Patient, David Z. Morgan, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—June 9, Update on Regional Resources for Neonatal Care, Dale Landes, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—June 15 (tba)

Spencer, • Roane General Hospital, 12:30 P.M.—June 20 (tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—June 6, Treatment of DKA, Shawn Chillag, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—June (no program)

Weston, ★ Stonewall Jackson Hospital, 6:30 P.M.—June (no program)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—June 28, Advanced Cardiac Life Support: A Chalk Talk, Harold Selinger, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—June 20, Legal Aspects of AIDS Testing in WV, Nora Antlake, J.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—June 15 (tba)

"Yes, I realize it is almost midnight—but I really don't care that I am about to forfeit my opportunity to take advantage of your offer!"

IMAGINE KNOWING THAT TODAY IS THE BEST DAY YOU'LL EVER HAVE.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

DeBakey Addresses Graduating Class

Internationally known surgeon and researcher Michael E. DeBakey addressed the graduating class at WVU School of Medicine's 27th annual investiture ceremonies, Saturday, May 13.

Doctor DeBakey, Chancellor of Baylor College of Medicine in Houston, Texas, and Director of the DeBakey Heart Center, spoke on "Medicine: A Profession in Flux."

Seventy-five WVU graduates took the Hippocratic Oath and were invested with the green academic hood of medicine during the ceremony in the Creative Arts Center auditorium.

Best known for his breakthroughs in the treatment of cardiovascular diseases, Doctor DeBakey has devised many new operations, devices and surgical instruments for the improvement of patient care. The Dacron artificial arteries he developed in 1953 are used throughout the world.

Several 'Firsts'

In 1964 he was the first surgeon to perform a successful aortocoronary artery bypass, and in 1966 he became the first to use successfully a partial artificial heart.

Doctor DeBakey has been a strong advocate for the importance of using animals in medical research and one of the most prominent opponents of the animal rights movement. Recently he was elected Chairman of the Foundation for Biomedical Research.

A native of Louisiana, he completed his undergraduate and medical education at Tulane University. After a residency at Charity Hospital in New Orleans, he studied at the universities of Strasbourg and Heidelberg.

During World War II, his work in the Surgeon General's Office led to the development of mobile army surgical hospitals (MASH units). He later helped establish centers for treating returning military personnel, which subsequently became the Veterans Administration Medical Center System.

Since 1948 he has been at Baylor College of Medicine, where he also is Olga Keith Wiess Professor, Chairman of the Department of Surgery, and Distinguished Service Professor.

The DeBakey Heart Center was established at Baylor in 1985 for research and public education in the prevention and treatment of heart diseases.

Infectious Waste Disposal Safe

Steam, nitrogen, carbon dioxide and sterile ash are all that remain of infectious wastes burned in a new incinerator at the WVU Health Sciences Center.

The $1 million pyrolytic incinerator is being used for safe disposal of potentially dangerous waste from research labs, Ruby Memorial Hospital and the outpatient clinics at the Health Sciences Center. Included are syringes, bandages, paper products, chemotherapy materials, and pathological waste such as blood, organs and tissue.

Materials not burned in the incinerator include radioactive waste and various chemicals. These are shipped out of state by carriers certified by the U.S. Environmental Protection Agency and buried in EPA-approved landfills.

The problem of disposing of infectious waste drew wide public attention last year when some East Coast beaches had to be closed after syringes and other objects washed ashore.

"The new incinerator guarantees that we will never be part of this very unfortunate problem," said Hal Harper, WVU Special Assistant to the Vice President for Health Sciences.

"All our infectious waste is being destroyed on-site in a way that is perfectly harmless to the environment," Harper said.

The incinerator includes two chambers. In the main chamber, waste material smolders at 1300 degrees F, a temperature more than 1000 degrees higher than that needed to kill all bacteria and viruses. Most of the waste is turned into combustible gases.

Harmful Gases Removed

In the second chamber, in which a thermal reactor raises temperatures to about 1900 degrees F, the combustible gases are burned completely. The remaining, noncombustible gases are then drawn through a scrubber that removes acids and any carbonized material.

The only gases released into the atmosphere are carbon dioxide, nitrogen and water vapor. The residual sterile ash, including melted metal and glass, is removed from the incinerator and dispatched to a landfill.

Unannounced inspections by the EPA and the West Virginia Air Pollution Control Commission insure that the emissions remain non-polluting.

Inspectors from the Air Pollution Control Commission were present in early March for the official test monitoring gases emitted from the stack of the new incinerator.

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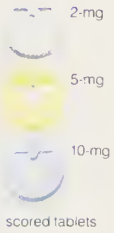

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MU School Of Medicine News

MARSHALL UNIVERSITY

Compiled from material furnished by the Office of University Relations, Marshall University.

Two MU Students To Research at NIH

Two MU School of Medicine Students have earned spots in the highly competitive summer research program of the National Institute of Health.

Kimberly Burgess of Huntington will work in the clinical neuroscience branch of the National Institute of Mental Health, probably on work relating to the brain chemistry of schizophrenia or Alzheimer's disease.

John Carl of Moorefield will study the effect of carcinogenic materials on metabolism. He will be working with Dr. Jane Sayer and Dr. Donald Jerina in the Bioorganic Chemistry Lab of the National Institute of Diabetes and Digestive and Kidney Diseases.

Marshall Associate Dean Patrick I. Brown said it is "truly exceptional" that Marshall has two students participating in this program, which draws hundreds of applications for approximately 75 slots annually.

Four MU Faculty Members Honored

Four Marshall faculty members have been honored recently by their peers and students.

Dr. Stebbins B. Chandor, Professor and Chairman of Pathology, has been appointed to the Finance Committee of the American Society of Clinical Pathologists.

Maurice A. Mufson, M.D., Professor and Chairman of Medicine, was selected as Researcher of the Year by the Marshall University chapter of Sigma Xi, the institutional research society.

At the 1989 Investiture Program, graduating seniors named Prathap Chandran, M.D., Associate Professor of Medicine, Clinician of the Year. Panos D. Ignatiadis, M.D., Clinical Associate Professor of Surgery, was named Volunteer Faculty Member of the Year.

Tolley Appointed To Radiology Post

Gary M. Tolley, M.D., has been appointed Acting Chairman of the Department of Radiology.

A faculty member since 1977, Doctor Tolley became a full professor in 1985. He is Chief of the Radiology Section at Cabell Huntington Hospital, and has served previously as Chief of the Medical Staff at the hospital. He is a past President of the Cabell County Medical Society.

Doctor Tolley received a B.S. degree from Marshall, a B.S. degree in medicine from West Virginia University, and his M.D. degree from the Medical College of Virginia. He served his internship at Charleston Memorial Hospital and his residency at Indiana University Medical Center.

He is board-certified in radiology and nuclear medicine. He is a member of the West Virginia State Medical Association, the Cabell County Medical Society, the American College of Radiology, and the American Medical Association.

Bateman's Mental Health Work Praised

Mildred Mitchell Bateman, M.D., Professor of Psychiatry at Marshall and Associate Clinical Director of Huntington State Hospital, has been honored by the Mental Health Association in West Virginia for her extensive contributions to the mental health field.

Doctor Bateman is a member of the group's Board of Directors, said Associate Director Dorothy Whitehurst, who described her as "a long-time volunteer and friend." Ms. Whitehurst said that Doctor Bateman was recognized at a meeting devoted to the theme "Stand Up to Stigma" because she has been very outspoken and supportive of that concept.

Among those honoring Doctor Bateman was former First Lady Rosalynn Carter, who sent a letter which referred both to her friendship and working relationship with Doctor Bateman, who was one of 20 members of the President's Commission on Mental Health. "Her impact on the nation's mental health care system has been profound," she said, singling out Doctor Bateman's "vast experience . . . innate goodness and good sense."

Two MU Researchers Get Heart Grants

Two Marshall researchers have received a three-year, $96,800 grant from the American Heart Association to study the molecular mechanism of a naturally occurring hypertensive factor.

"Previous work indicates that this hypertensive factor may be affecting the way calcium is handled by the vascular cells," said Physiologist Edwin C. Johnson, Ph.D., the grant's principal investigator. A number of researchers have suggested that calcium may have a role in hypertension, but no one has determined the precise mechanisms which are abnormal.

With Pharmacologist Mark Simmons, Ph.D., his co-investigator, Doctor Johnson will examine the effects of the hypertensive factor on the calcium channels of vascular smooth muscle membrane. Looking at these channels, which control the flow of calcium into the cells, they will record the calcium current before and after exposure to the substance. An increase in calcium availability in the vascular muscle would enhance contraction.

"We believe that this is probably one of the main mechanisms of the hypertensive factor's action, if not the primary mechanism," Doctor Johnson said.

The hypertensive factor was discovered by Marshall researchers Gary Wright and William McCumbee.

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WESPAC Members

Listed below are a additional 1989 WESPAC members reported to the *Journal* since those published in the May issue. New WESPAC members will be reported next month.

Physicians

Cabell
**Matthew C. Wilson

Eastern Panhandle
Edward Pinney

Harrison
*Cordell A. De La Pena
*Erlinda L. De La Pena

Kanawha
*James W. Kessel

Mercer
John A. Rizzo

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Ralph W. Ryan

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*Harry S. Weeks, Jr.

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*David W. Avery

Auxiliary

Cabell
*Eileen Martin

Kanawha
*Nancy Kessel

Ohio
*Esther Weeks
*Jane S. Altmeyer

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Obituaries

WILLIAM A. CRACRAFT, M.D.

Dr. William A. Cracraft, retired Charleston surgeon, died May 18 at his home. He was 72.

A native of Charleston, Doctor Cracraft was graduated from Virginia Military Institute, and received his M.D. degree in 1950 from the University of Maryland. He served his internship and residency at Union Memorial Hospital in Baltimore.

Doctor Cracraft was an Army officer during World War II and was a prisoner of war in North Africa for three years.

He was an honorary and retired member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Virginia K. Cracraft; a son, William A. Cracraft IV of Charleston; a daughter, Anne H. Cracraft, Knoxville, Tennessee, and a sister, Mrs Elizabeth Keightley, Lewisburg.

A. ROBERT MARKS, M.D.

Dr. A. Robert Marks, Clarksburg pediatrician, died March 25 in a hospital there. He was 69.

Doctor Marks practiced pediatrics in Clarksburg from 1949 until his retirement in 1987.

He was graduated from West Virginia University, and received his M.D. degree in 1943 from the University of Maryland. He interned and completed his residency at the University of Maryland Hospital in Baltimore.

Before starting practice in Clarksburg, Doctor Marks served with the U. S. Army Medical Corps in Germany.

A former Chief of Pediatrics at United Hospital Center in Clarksburg, Doctor Marks was a Diplomate of the American Board of Pediatrics, a Fellow of the American Academy of Pediatrics, and an honorary member of the Harrison County Medical Society, West Virginia State Medical Association and American Medical Association. He was a former President of the Harrison County Medical Society.

Doctor Marks was honored for 25 years of service to the League for Service Baby Clinic.

Survivors include the wife, Mrs. Jacquelyn L. Banquer Marks; the mother, Mrs. Sara Markovitch Markowitz of Clarksburg; a son, Dr. Jeffry L. Marks, Danbury, Connecticut; two daughters, Saundra M. Feaster and Pamela A. Gall, both of Greenville, South Carolina; one brother, Erwin J. Marks, Pittsburgh, and one sister, Elaine M. Pollock, Fairmont.

County Societies

McDowell

The McDowell County Medical Society met April 12 in Welch at the Bonanza Restaurant.

The guest speaker was Lowrie Glasgow, M.D., whose topic was "Current Ulcer Treatment."

The Society approved a motion that attendance at regularly scheduled meetings, after the first two meetings of a new year, be limited to only Society members, with the exception of medical students and interns.

The Society also approved a motion that the Secretary, at the beginning of the year, send a letter to county doctors encouraging them to join and informing them of the dues.—Charles E. Michaelis, M.D., Acting Secretary.

MONONGALIA

Gordon F. Murray, M.D., Chairman of the Department of Surgery, West Virginia University Health Sciences Center, was guest speaker for the meeting of the Monongalia County Medical Society April 4. His topic was "China, Riding the Iron Rooster."

Ed Dinan, Executive Vice President, Monongalia General Hospital, spoke on the status of current state legislation, particularly the Omnibus Health Care bill.—Robert L. Murphy, Executive Secretary.

PARKERSBURG ACADEMY

The Academy of Medicine of Parkersburg held a joint meeting with the Auxiliary March 8 at the Parkersburg Country Club.

WVSMA President Bill M. Atkinson, M.D., of Parkersburg spoke on issues affecting medical practice in West Virginia.

Members were reminded that lobbyists were needed at the Capitol Building in Charleston for the WVSMA legislative effort.--Frank Schwartz, M.D., Secretary.

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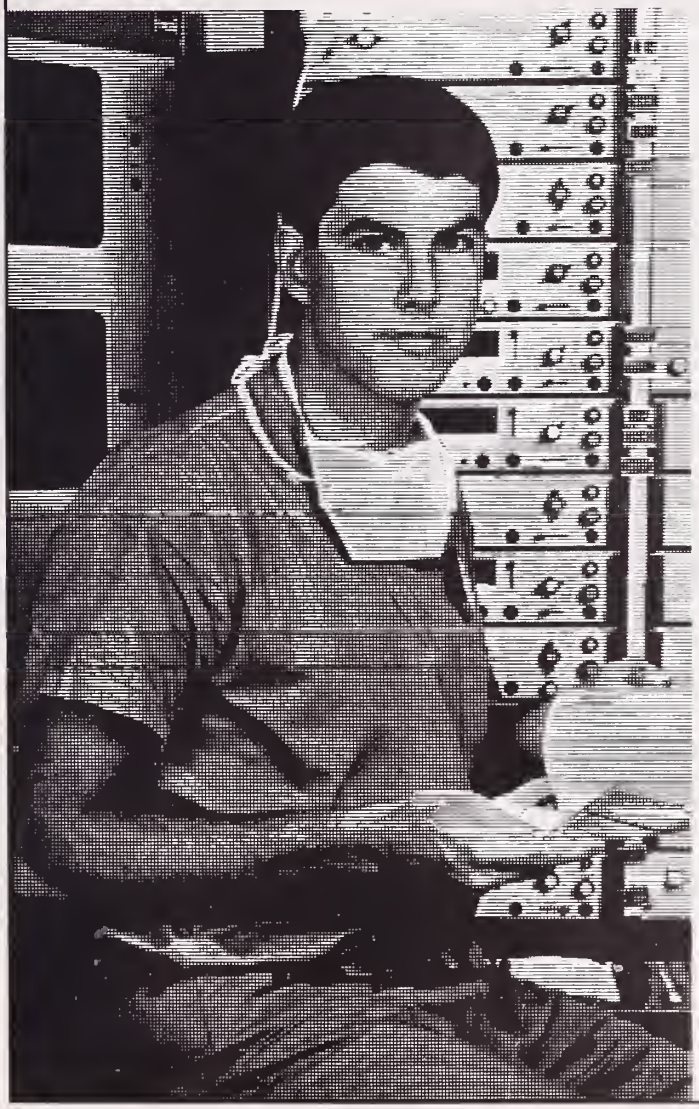

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VASOTEC®

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Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema:* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function:* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions.

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no teratotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

Hypertension: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest, pulmonary embolism and infarction, rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486.

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West Virginia Medical JOURNAL

July 1989 West Virginia State Medical Association Volume 85 No. 7

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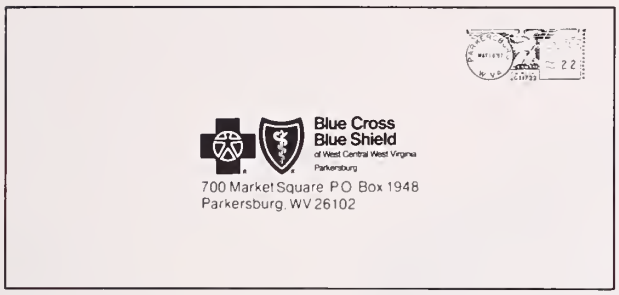

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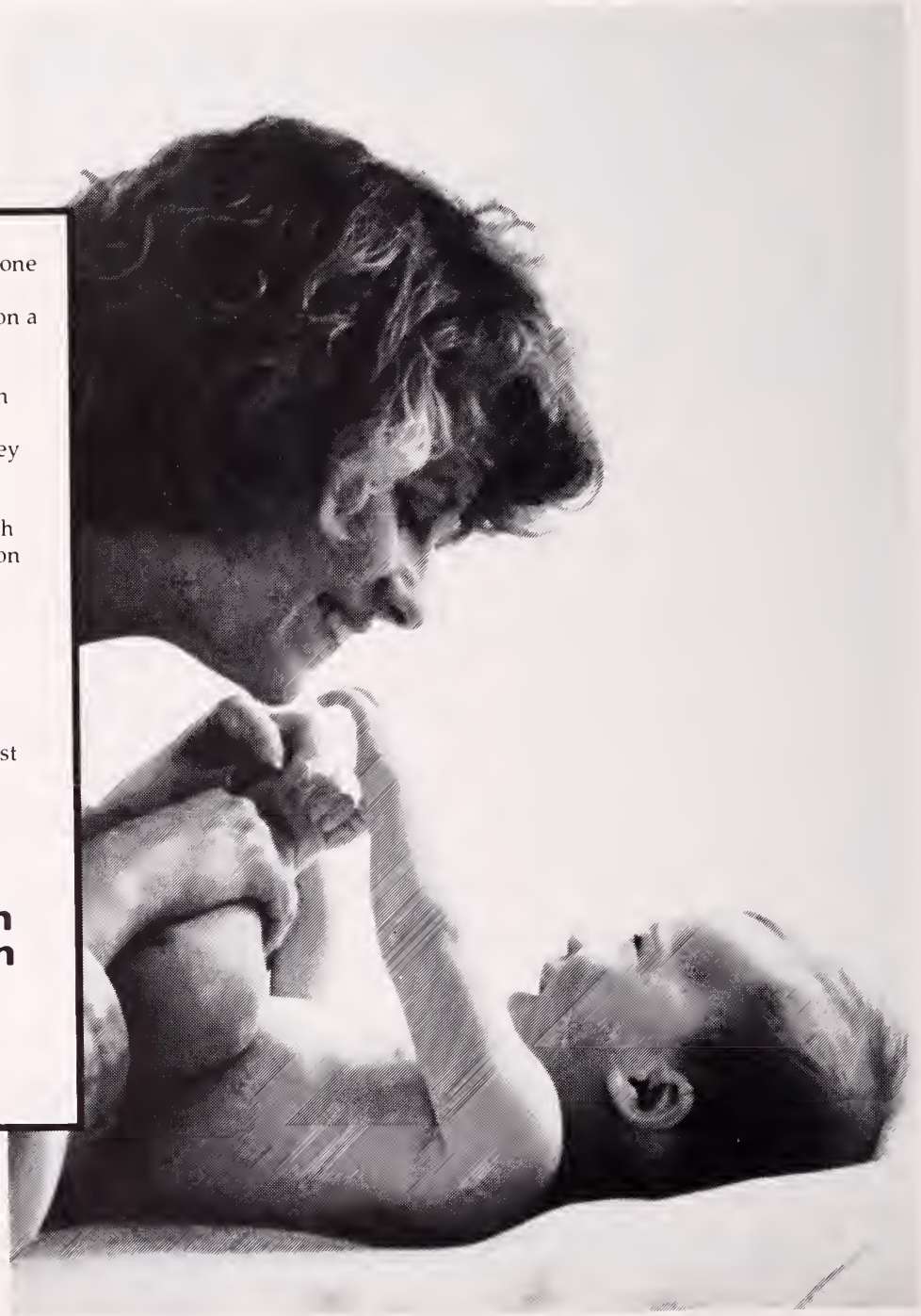

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

West Virginia Medical JOURNAL

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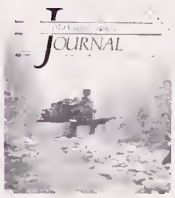

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Cass Scenic Railroad, a state-operated tourist attraction. Old-time Shay engines haul visitors 11 miles to the summit of 4,500-foot Bald Knob. Photo courtesy of West Virginia Department of Commerce. Ron Snow, Photographer.

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Mezlocillin, Azlocillin and Piperacillin

Comparison of In Vitro Susceptibilities Among Gram-Negative Rods

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The activity of mezlocillin, azlocillin and piperacillin was compared using 100 clinical isolates of gram-negative rods. Overall piperacillin had the highest activity with 72 per cent sensitive strains; mezlocillin, 66 per cent, and azlocillin, 57 per cent. In the group of Pseudomonas aeruginosa, however, mezlocillin showed distinctly lower activity than both piperacillin and azlocillin.

Introduction

Mezlocillin (Mezlin), azlocillin (Azlin) and piperacillin (Pipracil) belong to the ureido penicillins, a group of antibiotics with broad antimicrobial spectrum (1,2). They have activity against both anaerobes and gram-positive organisms, but their main use has been in the treatment of gram-negative infections. Because they belong to the same group of penicillins, their antibacterial activities are similar. Yet, minor differences have been reported, and they cannot be freely susbstituted for each other (3). Such *in vitro* studies are based on the microbial population at each investigational center. Since nationally collected data may not necessarily reflect the local situation in West Virginia, we wanted to compare the activity of these three antibiotics against clinical isolates from our community.

Materials and Methods

One hundred gram-negative rods were collected from three different hospitals: St. Mary's Hospital, Cabell Huntington Hospital and Veterans Administration Medical Center in Huntington, West Virginia. The isolates consisted of 25 Pseudomonas aeruginosa, 25 E. coli, 10 Enterobacter, 10 Klebsiella, 10 Proteus, five Serratia, five Morganella, five Providencia and five Citrobacter.

Bacteria from fresh cultures were grown in Mueller-Hinton broth for three to six hours until turbidity indicating active growth was seen. The broth was then diluted to 0.5 McFarland strength and streaked on Mueller-Hinton agars for antibiotic susceptibilities according to Kirby-Bauer technique (4). Specifically, the organisms were tested against mezlocillin azlocillin and piperacillin. After incubation for 18 hours at 37° C, the zones of inhibition were measured. Susceptible strains were those with zone diameters of 18mm or larger. Intermediate susceptibility was 15-17mm, and those 14mm or less were considered resistant.

Results and Discussion

The percentage of susceptible, intermediately susceptible and resistant strains are listed in the Table. Even though the three antibiotics had fairly similar activity within each category of organisms, when all 100 strains were added together there was a wide spread to be seen. Azlocillin had the lowest number of susceptible organisms (57 per cent), and piperacillin had the highest (72 per cent). Mezlocillin was in between with 66 per cent susceptible strains. Comparing the number of resistant strains showed the same pattern. Piperacillin had the lowest number of resistant strains (23 per cent) followed by mezlocillin (26 per cent), while azlocillin had the highest with 30 per cent. In the category of Pseudomonas, however, mezlocillin had the poorest activity. Of 25 strains, only 16 (64 per cent) were sensitive to mezlocillin compared to 21 (84 per cent) for azlocillin and 22 (88 per cent) for piperacillin. In the group of Entero-

TABLE
Per cent Susceptible, Intermediately Susceptible and Resistant Strains Grouped by Bacterial Species

	SUSCEPTIBLE			*INTERMEDIATE*			*RESISTANT*		
	MZ	*AZ*	*PIP*	*MZ*	*AZ*	*PIP*	*MZ*	*AZ*	*PIP*
Pseudomonas	64	84	88	16	8	4	20	8	8
E. Coli.	72	72	72	0	0	0	28	28	28
Proteus sp.	100	90	90	0	0	10	0	10	0
Klebsiella	80	10	80	10	60	20	10	30	0
Enterobacter	10	0	10	10	10	0	80	90	90
MPCS	65	40	70	10	20	5	25	40	25
All isolates	66	57	72	8	13	5	26	30	23

MZ = mezlocillin, AZ = azlocillin, PIP = piperacillin
MPCS = Morganella/Providencia/Citrobacter/Serratia

bacters all three antibiotics did extremely poorly. We conclude that, with the exception of Enterobacter species, all three antibiotics had good activity against most of the gram-negative rods tested, but that overall piperacillin was the most active of the three drugs, and azlocillin the least active. However, among Pseudomonas aeruginosa, mezlocillin had a markedly lower activity and is a less suitable antibiotic for empiric therapy when Pseudomonas is suspected.

Generic/Trade Names

Generic drugs (with trade names in parentheses) mentioned in this article are mezlocillin (Mezlin), azlocillin (Azlin), and piperacillin (Pipracil).

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Analysis of Multicenter Study

Clinical Experience With Ciprofloxacin

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In a multicenter study of 32 patients treated with ciprofloxacin (mean daily dosage, 1,000 mg per day; mean duration of treatment, 9.5 days) for a variety of infections, eight were microbiologically proved. Of these, bacteriologic cure and/or improvement resulted in all cases. For all 32 infections, clinical cure and/or improvement resulted. Four infections were classified as chronic.

There were 3/32 (9.4 per cent) adverse reactions (ADRs), and one case each of nausea, dizziness and increased menstrual flow. Only the dizziness and nausea were considered related definitely to ciprofloxacin therapy. Therapy with ciprofloxacin was discontinued in all three patients because of adverse effects.

Introduction

Ciprofloxacin (CIPRO®) is a newly approved (1987) antimicrobial which demonstrated high activity *in vitro* against gram-negative and gram-positive aerobic pathogens (1, 2). It has excellent *in vitro* activity against *Enterobacteriaceae* species, *Pseudomonas aeruginosa, Haemophilus* and *Neisseria* species (3). Orally administered, ciprofloxacin exhibits therapeutically achievable Minimal Inhibitory Concentrations (MICs) against methicillin-resistant *Staphylococcus aureus*, and is the most potent oral antimicrobial available for use against this pathogen (4). Therefore, ciprofloxacin has been regarded as an excellent oral alternative to injectable antibiotics.

Most of the literature reports double-blind, controlled comparative trials intended for submission to the FDA for marketing approval. However, these studies contain extremely restrictive inclusion and exclusion criteria, and may or may not be related to the way the product performs in the day-to-day practice of medicine. Thus, an evaluation of the efficacy and safety of ciprofloxacin in day-to-day medical practice was performed. In the following, data from an open clinical multicenter study performed in the state of West Virginia is reported.

Patients and Methods

Guidelines for patients admitted into the study were established by a standardized protocol. Data were collected on brief, two-page Clinical Evaluation Forms (CEFs) completed by the investigators. Subsequently, the CEFs were retrieved and analyzed by Oxford Health Care, Inc., Clifton, New Jersey. Each physician, investigator categorized all patients' infections as either lower respiratory tract, soft tissue, skin and skin structure, or other. Four investigators from West Virginia entered 32 patients into the study. Only those patients who received ciprofloxacin alone as antimicrobial therapy were evaluated.

Several criteria determined patient selection. Inclusions: male and female inpatients or outpatients over 18 years of age who exhibited clinical evidence of lower respiratory tract infection, skin and skin structure infection, or soft tissue infection. Exclusions: females who were pregnant, nursing, or not practicing contraception; patients with known or suspected allergy to quinolone antibiotics or with known moderately to severely impaired renal function; those displaying clinical evidence of hepatic disease or requiring other concomitant antimicrobial therapy; and patients with known clinically impaired immunological function.

Physicians were asked to record adverse reactions, their duration and intensity, and the action taken in regard to medication adjustment or outcome. Any serious or unexpected reaction was to be reported within 72 hours to Miles Inc. The investigators were to use their judgment regarding patient response to therapy and to adjust antimicrobial medication if response was determined inadequate. Patients were allowed to receive any other medication deemed necessary by the physician. The package insert acted as the guideline for prescribing information.

Bacteriology

Specimens were collected, when available, from sites of suspected

infection prior to the administration of ciprofloxacin. Physicians were also asked to obtain a culture at the end of ciprofloxacin therapy if culturable material was available. Sensitivity analysis was performed using ciprofloxacin disks provided by Miles Inc. For patients with respiratory tract infections, sputum was processed for gram stain and culture whenever possible. However, many lower respiratory tract infections and closed wound infections precluded collection of a culture specimen.

Results

A biostatistician at Oxford Health Care, Inc. supervised data processing. The statistics generated were descriptive in nature, tabulated exactly from the CEF. Complete as well as incomplete CEFs were included in the results regardless of whether the physician followed every protocol parameter. All patients were included in the analysis of clinical efficacy. However, only those patients who had a positive culture with an identified organism were included in the evaluation of bacteriologic efficacy.

No patient who received any type of anti-infective medication concomitantly with ciprofloxacin was evaluable for either safety or efficacy. All 32 patients were included in the analysis of tolerance to the drug and of adverse effects of treatment. The data indicated that no patient received a concomitant antimicrobial in this study. Skewed data were eliminated when necessary.

A total of 32 patients (13 men and 17 women) aged 16 to 80 years (mean age 52.8 years) received 1,000 mg of ciprofloxacin per day (mean dosage 1,000 mg per day) for three to 20 days (mean duration, 9.5 days).

The spectrum of infections treated comprises a variety that would be expected in a multicenter trial with four participating physicians from across the state. The infections were classified as lower respiratory tract (43.7 per cent), skin and skin structure (40.6 per cent), soft tissue (12.5 per cent), and other (3.1 per cent). Of note, for the 29 patients who had this data indicated, all were outpatients; none was hospitalized. One patient was continuing ciprofloxacin therapy at the time of evaluation.

Patients were evaluated for both clinical and bacteriologic efficacy. All patients who received at least one dose of ciprofloxacin were considered for the evaluation of the clinical efficacy of therapy regardless of whether a culture was obtainable. Physicians were asked to rate the final clinical outcome of the infection by indicating cure, improvement or failure. Final clinical outcome of therapy with ciprofloxacin for each diagnostic category is summarized in Table 1. Clinical cure was achieved in 71.9 per cent of cases, improvement in 28.1 per cent. No patient had an outcome considered a clinical failure by the treating physician.

Patients who had an initial culture that identified a pathogen were included in the analysis of bacteriologic efficacy. Of these, eight indicated the specific bacteria cultured and the outcome of therapy. Negative cultures and cultures indicating normal flora were not evaluable. Within these parameters, for eight of 32 patients, the infection was microbiologically proved. Of these evaluable patients, bacteriologic cure resulted in 87.5 per cent and improvement in 12.5 per cent. No failures were reported. Interestingly, bacteriologic outcome was equal to or better than the clinical outcome.

In these eight microbiologically proven infections, 50 per cent were classified as skin and skin structure, 37.5 per cent lower respiratory tract, and 12.5 per cent soft tissue. No bacteriologically proven infections were reported in either the urinary tract or other categories. Though urinary tract infection was not a category on the CEF, it was statistically separated for discussion and analysis. The five reported pathogens and their bacteriologic outcome are summarized in Table 2.

Overall, four (12.5 per cent) infections were considered chronic. Both the final clinical and bacteriologic outcomes were examined for the chronic infections. For one patient, data were available as to the final clinical outcome; this patient improved. Bacteriologic outcome was indicated for another patient who also improved.

Adverse Reactions

All 32 patients treated with ciprofloxacin were included in the evaluation of tolerance and adverse

TABLE 1
Final Clinical Outcome Classified by Location of Infection*

	% OF TOTAL (NUMBER OF PATIENTS)			
	CURE	*IMPROV*	*FAILURE*	*CURE & IMPROV*
Lower respiratory tract	64.3%(9)	35.7%(5)	0 %(0)	100%
Soft tissue	100%(4)	0 %(0)	0 %(0)	100%
Skin/skin structure	76.9%(10)	23.1%(3)	0 %(0)	100%
Urinary tract		no cases reported		
Other	0 %(0)	100%(1)	0 %(0)	100%
Total	71.9%	28.1%	0%	100%

*Data available for all 32 patients.

TABLE 2
Five pathogens Identified in Eight Evaluable Cultures and Bacteriologic Outcome

	OUTCOME		
TYPE OF ORGANISM	*CURE*	*IMP*	*FAIL*
Staphylococcus aureus	3	1	0
Klebsiella pneumoniae	1	0	0
Pseudomonas maltophilia	1	0	0
Branhamella catarrhalis	1	0	0
Staphylococcus species	1	0	0

effects related to therapy. Of the 32 patients, 29 reported no side effects (90.6 per cent). Three patients reported adverse effects: one case each of dizziness, nausea, and increased menstrual flow. No headaches or rashes were reported. The dizziness and nausea were considered definitely drug related; the increased menstrual flow was considered possibly related to ciprofloxacin therapy. All adverse effects were rated as severe, and all three patients discontinued therapy (9.4 per cent of total number).

No abnormal laboratory findings related to the administration of ciprofloxacin were reported.

Discussion

A relatively new class of antimicrobials, the fluoroquinolones, has emerged as a powerful new resource for physicians to treat a broad spectrum of infections. Ciprofloxacin is a potent member of this drug class.

Analysis of this multicenter study indicates that there is a good correspondence between the *in vitro* activity of ciprofloxacin and the clinical efficacy of treatment with ciprofloxacin. Clinical cure was observed in 71.9 per cent of all infections. Cure plus improvement equaled 100 per cent of all cases.

Bacteriologic cure and/or improvement was also reported in all cases with a positive bacteriologic culture. No failures were reported in either clinical or bacteriologic categories. These results are quite impressive, attesting to the power of ciprofloxacin. Furthermore, these results were obtained despite the fact that 12.5 per cent of the infections were considered chronic.

The safety of ciprofloxacin was assessed for all patients. Overall, therapy with ciprofloxacin was extremely well tolerated. Adverse experiences were infrequent and generally mild.

Furthermore, physicians reported 20 classifications of medications that were administered concomitantly with ciprofloxacin. Anti-inflammatories, diuretics, cardiotonics and theophylline headed the list. Still, adverse reactions were minimal. No patients were reported to have had an allergic reaction to ciprofloxacin, nor were any incidents of theophylline toxicity reported.

Conclusion

The present clinical experience has shown that a dosage of 500 to 1,500 mg of ciprofloxacin therapy per day (1,000 mg/day in this study) is effective in a broad spectrum of infections including *E. coli, Staphylococcus aureus, Proteus* species, *Streptococcus* species, including *S. pneumoniae, Pseudomonas* species and *Staphylococcus epidermidis*. In addition to an overall clinical efficacy (cure plus improvement) of 100 per cent, the bacteriologic efficacy in eight patients was 100 per cent.

Furthermore, the safety of ciprofloxacin was excellent. Adverse reactions were generally mild, gastrointestinal in nature and infrequent. In conclusion, it appears that ciprofloxacin offers ease of administration as well as high efficacy and safety in the treatment of a wide variety of infections that previously might well have required parenteral therapy and/or hospitalization.

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Case Reports, Literature Review

Sjogren's Syndrome: Implications for the Primary Care Physician

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Sjogren's syndrome (SS) is a common immunologically-mediated disorder that will afflict a great proportion of our population in future years. The primary care physician undoubtedly will be confronted with such patients, many of whom will have complaints and findings not generally believed to be due to SS. In this communication, case reports of four patients with SS as well as a literature review are presented. Two patients had presentations that were classic for SS; however, the other two were diagnostic challenges. Emphasis is placed on the atypical and unusual way SS can present so that the primary care physician can more easily make the diagnosis and initiate therapy.

Introduction

Although derangements in immune function have fascinated medical investigators for centuries, today's primary care practitioner is facing ever greater numbers of patients who present with disorders related to immune defects. This may range from the anergy and immunosuppression that are side effects of cancer chemotherapy to the rare but deadly entity known as acquired immunodeficiency syndrome, AIDS.

As the population ages, doctors of all specialties will be confronted with greater numbers of patients with immune defects since it is known that senescence of the immune response predisposes it to

TABLE 1
Diseases Associated With Sjogren's Syndrome

AUTOIMMUNE	*MECHANISM UNCLEAR*
Rheumatoid Arthritis	Interstitial Nephritis
Systemic Lupus Erythematosus	Cryptogenic Cirrhosis
Polymyositis	Type I Renal Tubular Acidosis
Hashimoto's Thyroiditis	Fibrosing Alveolitis
Scleroderma	Nephrogenic Diabetes Insipidus
Mixed Connective Tissue Disease	Chronic Active Hepatitis
Vasculitis	
Mixed Cryoglobulinemia	

malfunction (1). Disorders of immune regulation such as rheumatoid arthritis and sarcoidosis are common entities which usually present first to the primary care doctor.

Other disorders, hitherto uncommon, are certain to be seen in large numbers as the population ages. One such malady, Sjogren's syndrome (SS) (reviewed in reference 2), can present in a variety of ways. It is an autoimmune disease that involves the salivary and lacrimal glands, and is recognized clinically by xerophthalmia and xerostomia usually in the presence of a connective tissue disorder.

This article presents a brief discussion of historical aspects of this interesting disease and some immunologic concepts regarding its pathogenesis. It reviews the clinical and diagnostic features of Sjogren's syndrome, reports some interesting cases seen in Wheeling in the past few years and discusses the medical management of SS.

Historical Perspective

Sjogren's syndrome is a chronic inflammatory autoimmune disorder characterized by dryness of eyes, mouth and/or other mucus membranes including those of the respiratory and gastrointestinal tracts, and frequently associated with autoimmune disease (Table 1). It is the result of lymphocyte-mediated destruction of the salivary and lacrimal glands that leads to decreased production of saliva and tears. Ocular involvement known as keratoconjunctivitis sicca (KCS) results from decreased tear flow due to atrophy of the lacrimal glands. Xerostomia, oral dryness, stems from a similar pathologic process affecting the salivary glands. The clinical manifestations of the disease were found by Hadden in 1888 (3). Mikulicz, four years later (4), published a case report of a German farmer who suffered from bilateral parotid gland enlargement. A biopsy revealed an intense focal lymphocytic infiltrate. In the 1920s, Gougerot (5) described the disease in France. In 1933, Sjogren, a Swedish ophthalmologist, published his monograph on the disease (6) emphasizing the eye manifestations as local findings of a systemic disorder. In 1953, Moran and Castleman (7) showed that the histopathlogic findings of Sjogren's syndrome and Mikulicz's disease are indentical.

> ***"Patients with SS usually have dry-eye syndrome, characterized by itching and burning and redness of the eyes."***

The disorder affects about one person in 200. Females are involved 10 times more commonly than males with greatest incidence between age 40 and 60 years. It is a disease mainly of postmenopausal women. Up to 30 per cent of the patients with Sjogren's syndrome have rheumatoid arthritis (RA) and hypergammaglobulinemia. Systemic lupus erythematosus (SLE) is seen in about five per cent, polymyositis in four per cent, and mixed connective tissue disease in three per cent of cases of SS.

Clinical Profile

Patients with SS usually have dry eye syndrome, characterized by itching and burning and redness of the eyes. Some describe a foreign body sensation. Lacrimal and parotid gland enlargement may accompany these symptoms. In addition to ocular involvement xerostomia as manifested by oropharyngeal dryness, decreased saliva, increased incidence of dental cavities, and pain on alcohol ingestion may be found. Dry skin, alopecia areata, cutaneous purpura, vaginal dryness and dyspareunia may also occur in SS. Many patients are diagnosed as having SS in the absence of xerostomia or in the absence of RA or other connective tissue disease. These patients may represent a form fruste of Sjogren's syndrome.

Etiology

The cause of SS is unknown. Genetic and viral etiologies have been offered to explain the pathogenesis and progression of this disease. SS could be obtained directly from acquired viral infection(s). For example, cytomegalovirus has been isolated from New Zealand black/New Zealand white (NZB/NZW) mice with experimental autoimmune disease (8). In either case, there is an alteration of the amount of T-cell suppression with increased B-cell antibody synthesis and activation of helper T-cells (9).

Many immunogenetic markers have been examined to determine the patient's predisposition to develop SS. Certain histocompatibility antigens, specifically HLA-B8 and Dw 3, are more commonly found in patients with primary SS (KCS plus xerostomia), but there is no associated increase in these markers in patients with secondary SS (KCS and xerostomia plus connective tissue disease) (10).

Hormonal factors must also be considered. In general, androgens tend to suppress, and estrogens accelerate, many auto-immune disease states such as SLE. Testicular atrophy, most commonly seen in cirrhotic men, is often accompanied by parotid hypertrophy. Parotid enlargement is also seen in women who are lactating.

Diagnostic Tests

Over the years, many tests have been developed to help the clinician diagnose Sjogren's syndrome. These can be divided into functional, anatomic, biochemical, pathologic and immunologic tests. The functional tests are (1) slit lamp

biomicroscopic examination of the eye, (2) tear break-up time, (3) Schirmer's test, and (4) parotid gland flow rate and sialography. Parotid gland flow rate (11), sialography (12), and radionuclide studies (13) can determine the ability of the parotid gland and salivary glands to function.

Anatomic tests for SS include Rose Bengal and fluorescein dye staining of the eye.

Biochemical tests of SS include measurements of tear osmolarity and tear lysozyme.

Pathologic tests for SS include biopsies of lacrimal, parotid and/or minor salivary glands. Since SS is a systemic disease, the latter gland should show sufficient pathological changes to enable the diagnosis to be made. Minor salivary glands are ubiquitous, and punch biopsy of such sites as the lip, soft palate, nasal mucosa or buccal mucosa usually is sufficient. Classically, the initial lesion is a massive infiltration of the gland, which gives rise to the entity "benign lymphoepithelial lesions." Architectural variations (such as focal, punctate, nodular or diffuse) are related to severity and chronicity.

As the disease progresses, the changes become more definite with acinar atrophy and formation of areas of ductal epithelial cells surrounded by lymphocytes called "epimyoepithelial islands." Ultimately, connective tissue replaces the lacrimal and salivary gland acini and ductules.

SS ranks second only to SLE in its abundance of serum autoantibodies, both organ-specific and non-organ-specific. Hypergammaglobulinemia and rheumatoid factor (RF) are very common (1, 15), and antinuclear antibodies (ANA) are found in roughly two thirds of SS patients (16), although anti-DNA antibodies are usually only found in SLE (17). Recently, the auto-antibodies termed anti-Ro (SS-A) and anti-La (SS-B) have been found in a large number of SS patients as well as anti-salivary duct antibodies and others (reviewed in reference 18). These findings suggest a systemic auto-immune disorder whose target organs are mainly the lacrimal and salivary glands. Other aberrations of the immune system such as impaired cellular immunity (19) and alterations in the absolute and relative number of T- and B- lymphocytes (20) have been observed.

Since SS is a systemic disorder, the patient(s) may also have anemia, leukopenia and eosinophilia as well as findings that we would suspect to be present if the SS is secondary to a disorder like RA or SLE.

Four patients are presented. Two patients had the clinical and laboratory parameters classically found in SS. The remaining two patients had unusual features which are not usually found in patients with SS.

Case One: A 52-year-old white female developed gradual onset of morning stiffness, gelling phenomena and swelling and pain in the metacarpophalangeal and proximal interphalangeal joints, knees, ankles and wrists at the age of 50. Nodules appeared over the olecranon processes, and occasional bouts of olecranon bursitis complicated her course. One year later she sought medical attention. It was noted that there was no family history of arthritis, she did not smoke or drink alcohol, RF was positive at a titer of 1:320, and ANA was negative. Westergren Sedimentation Rate (ESR) was 82 mm, and hematocrit was 34 with normal indices.

"Ultimately, connective tissue replaces the lacrimal and salivary gland acini and ductules."

She was treated with 16 aspirin per day (salicylate level 24) with relief of most of her symptoms. She refused remittive therapy. The next year she noted gradual development of a dry, gritty sensation in her eyes, and dryness of her mouth which caused her to need to consume two eight-ounce glasses of water at each meal to facilitate swallowing. No parotid or lacrimal gland enlargement was noted. A Schirmer's test revealed only 10 mm of wetting after five minutes (abnormal result). There was a scant salivary pool in the floor of the mouth. An anti-SS (anti-Ro) antibody test was positive. A lower lip biopsy revealed heavy lymphocyte infiltration with focal collections of cells (Figure 1).

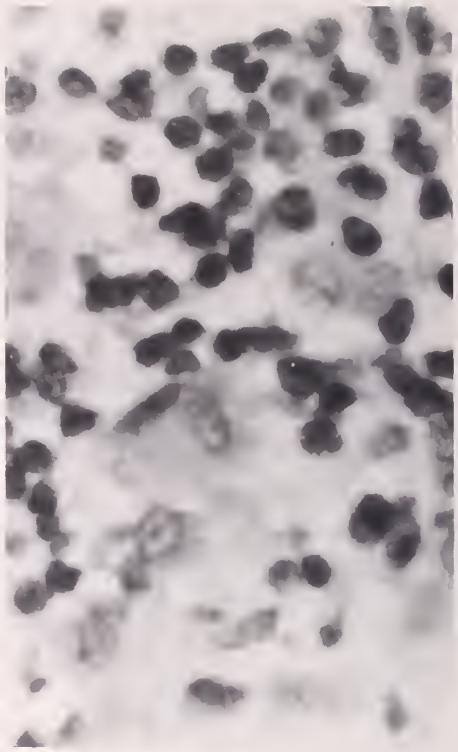

Figure 1. Lower lip biopsy of patient with classic SS. Note the focal infiltration of lymphocytes.

Comment: Case one is a fairly typical example of SS associated with a connective tissue disease, in this instance, RA. The development of SS one to two years after the onset of seropositive nodular RA is not unusual. The positive serology along with the classic biopsy features and abnormal Schirmer's test all point to a diagnosis of classic SS.

Case Two: A 58-year-old white female noticed the gradual onset of dry mouth associated with mild bilateral parotid swelling. Subsequently, a persistent foreign body sensation in both eyes prompted her to seek medical attention. Both Schirmer's tests (seven mm wetness in five minutes) and Rose bengal test were abnormal, and the diagnosis of keratoconjunctivitis sicca (KCS) was established. The salivary pool was felt to be meager.

Figure 2. Sialogram of patient 3. Normal ducts in the midst of acinar hypertrophy is illustrated.

Figure 3. Plasma cells demonstrating strongly positive immunoperoxidase staining located in otherwise normal acinar tissue in patient 3.

Sialography revealed mild sialectasia and slight parotid hypertrophy bilaterally.

General physical examination and vital signs were normal. No evidence of skin rash, arthritis, neurological or muscular focal abnormalities were observed. RF was positive at a titer of 1:40, ANA was negative; anti-SS-A (anti-Ro) and anti-SS-B (anti-La), cryoglobulins and C1q binding tests were negative. Complete blood count (CBC), serum chemistries, thyroid studies, and lipid profile were normal. Westergren Sedimentation Rate was 34.

Comment: Case Two is an illustration of how SS can present when not associated with any underlying connective tissue disorder. Although the RF was positive in low titer, there was no clinical evidence of arthritis. Rather, the positive serology was a reflection of an underlying loss of control of immune function resulting in a polyclonal activation of B-cells instead of a reflection of the activity of an arthritic or inflammatory disorder like RA or SLE. Often, primary SS patients can have positive RF, ANA, anti-SS-A or anti-SS-B antibodies and other abnormal antibodies.

Case Three: A 54-year-old white female presented with marked bilateral parotid enlargement. She had been well until eight years prior to this visit when she noted intermittent swelling of both parotid glands. These episodes were mild and transient. She was seen by a rheumatologist 10 years prior for generalized joint stiffness and pain. At this initial evaluation, she also complained of Raynaud's Phenomenon that was transient as well as intermittent burning, watery eyes and dry mouth. She denied a history of digital ulceration serositis, nodules, skin rash or alopecia. ANA, urine analysis (U/A), RF, Serum protein electrophoresis were negative or normal as were the x-rays of her chest, knees, hands and feet.

The patient was treated with acetaminophen and was lost to follow-up. She again sought medical attention six years later when she noticed the abrupt onset of marked bilateral parotid swelling and orbital puffiness as well as extremely dry mouth. This progressed to the point where she was barely able to open her eyes or mouth. Her arthralgias had worsened, she experienced fevers and night sweats, and she had had two episodes of "pleurisy" that responded to high-dose aspirin therapy.

Physical examination was remarkable for bilateral marked diffusely moderately firm parotid swelling without pain or tenderness. Crystal clear salivary secretion was expressed from the Stenson's duct orifice. There was a slight malar blush, mild soft tissue swelling of metacarpophalangeal and proximal interphalangeal joints of the hands, and the absence of the normally-appearing saliva pool on the floor of the mouth. Lacrimal glands were not enlarged. A Schirmer test was performed. It revealed normal tear production. Her blood pressure was 110/70, and her cardiopulmonary, abdominal and neurological examinations were normal. She was afebrile, and no signs of infection were noted.

She was admitted for further work-up. Her admission white blood cell count was 12,400 (81 segs, 4 bands, 14 lymphs, 1 eos); ESR was 32 (Nml 0-20); ANA positive at a titer of 1:1,280 with a homogeneous and peripheral pattern. The following tests were negative or normal: electrocardiogram, chest x-ray, electrolytes, glucose, liver function tests, U/A, angiotensin converting enzyme, RF, SS-A, SS-B antibodies, and total serum hemolytic complement.

The sialogram (Figure 2) showed normal ducts with marked acinar hypertrophy. There was no evidence of sialectasis or punctate dilatation of the peripheral ducts. There was no dilatation of the interlobular ducts. No space-occupying lesions were noted. Both parotid glands were enlarged and measured nine centimeters vertically and three centimeters in thickness. A lower lip biopsy was obtained. It contained mucus glands that were histologically normal. No evidence of lymphocytic, granulomatous or neoplastic involvement was seen. Immunohistochemical studies using the immunoperoxidase technique revealed a lymphoplasmacytic

infiltrate, however (Figure 3). Plasma cells stained for gamma, mu, and alpha heavy chains as well as kappa and lambda light chains.

Comment: The patient in case three fulfills sufficient diagnostic criteria for a diagnosis of SLE (21) Table II (adapted from Maxwell (22)) lists the numerous disorders that can cause parotid enlargement The sialogram excludes the obstructive causes of parotid swelling in our patient. Metabolic, toxic and allergic causes are ruled out by the history and laboratory tests. Infectious etiologies are unlikely since there was no fever and the saliva was clear. No positive cultures were observed. Clinically, we felt that this patient's parotid enlargement was immunologically mediated and resembled Sjogren's syndrome.

The outstanding feature of Sjogren's syndrome is the aggressive behavior of lymphoid cells, which infiltrate and destroy salivary and lacrimal glands (22). However, our patient's minor salivary gland tissue stained with conventional staining techniques, failed to demonstrate this cellular infiltration. The finding of plasma cells which stained intensely for light and heavy immunoglobulin chains strongly suggests a humorally mediated immune process affecting parotid and other salivary gland tissue.

TABLE 2
Causes of Parotid Gland Enlargement

I. OBSTRUCTIVE
- a. Calculi
- b. Strictures
- c. Cysts

II. NONOBSTRUCTIVE
- a. Leukemia
- b. Tuberculosis
- c. Syphilis
- d. Toxins (Lead, Iodides, etc.)
- e. Gout
- f. Uveoparotid Fever

III. CONNECTIVE TISSUE DISEASES
- a. Sjogren's syndrome
- b. Mikulicz's Disease
- c. Lupus

IV. NEOPLASIA

Case Four: A 63-year-old white male in good health with no chronic medical problems developed severe epistaxis on several occasions at age 62 These were treated by cauterization but no etiology could be found One month later, he noted the onset of bilateral parotid swelling and pain but no xerostomia. No complaints of arthritis, arthralgia, focal or general weakness or rash were noted. A sialogram showed small sacculations to the distal intraductal branches along with slight glandular hypertrophy (Figure 4).

Two months later, he developed numbness of the left side of his face and loss of the sensation of taste on the anterior area of the left side of the tongue. Examination revealed a well-nourished, well-developed male in no distress. Vital signs were normal. Cardiopulmonary, dermatologic, abdominal and musculoskeletal examinations were unremarkable.

Neurological and HEENT examinations were normal with the exception of anaesthesia to pinprick of the left side of the face corresponding to the maxillary and mandibular divisions of the left trigeminal nerve (fifth cranial nerve). There was objective loss of taste sensation on the anterior portion of the left side of the tongue corresponding to the chorda tympani, a division of the facial nerve (seventh cranial nerve). There was no facial droop or motor involvement.

On initial and subsequent examinations there was mild parotid swelling, slightly greater on the left side. A Schirmer's test revealed normal tear flow, and there was a scant salivary pool on the floor of the mouth Prothrombin time, CBC, UA, glucose tolerance test, lipid profile, and chemistry profiles were normal. RF was positive at a titer of 1:20. ANA was absent. Total serum complement was normal. Zeta Sedimentation Rate was 67 per cent (normal up to 54 per cent). Anti-SS-A (anti-Ro) antibodies were present.

The first lower lip biopsy revealed stromal tissue with degenerative features but no acini were seen. A repeat lower lip biopsy (Figure 5) revealed acini with atrophic features and focal "budding." There was a predominance of mucus glands. There was a paucity of acini in general.

Comment: This patient is atypical in several ways. Keratoconjunctivitis sicca and/or xerostomia usually bring the patient to the physician's attention. In this case, epistaxis was the presenting problem. Dryness of the nasal mucus membranes secondary to SS was thought to be the cause since no

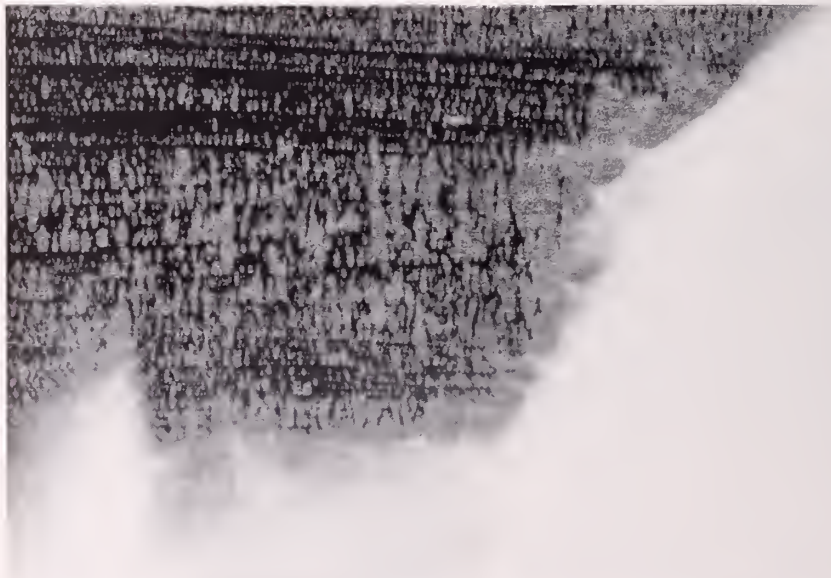

Figure 4. Abnormal sialogram of patient 4. Note the sacculations of the distal intraductal branches.

anatomic defect or underlying disorder in coagulation was present. This patient's problems quickly included bilateral parotid swelling and peripheral neuropathy involving two cranial nerves. Neuropathy can be a complication of SS (23), but it is not a common one. The mechanism is thought to be secondary to vasculitic involvement of the vasa nervorum. Had the neuropathy preceded frank parotid swelling, the diagnosis of SS would have been delayed.

The preceding four cases illustrate the different ways SS can present. Once thought to be a disease of lymphocytic cellular infiltration, SS is now thought to represent a spectrum of immune dysfunction. Most SS patients seem to exhibit a cell-mediated type of attack on the lacrimal and parotid glands as in cases one and two. However, case three is an example of a patient whose parotid enlargement is due to humoral immune dysfunction, a mechanism suggested by Steinberg and Talal (24) over a decade ago but only shown conclusively by the recent demonstration of a lymphoplasmacytic infiltrate in the acini by immunoperoxidase staining techniques (25). The biopsies in case four were also atypical in that a great deal of acinar destruction was present, but no intense lymphocytic infiltrate was noted.

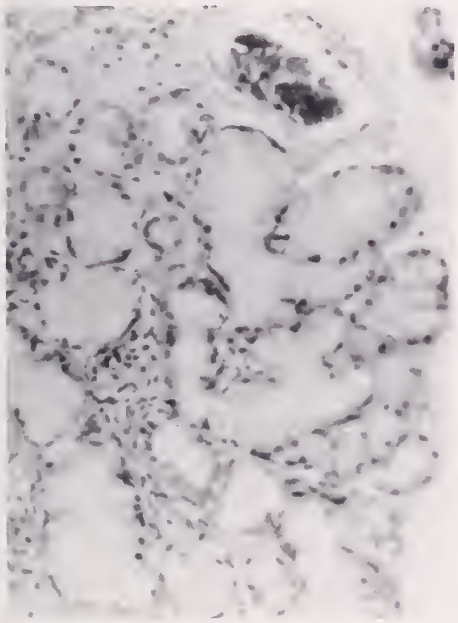

Figure 5. Repeat lower lip biopsy in patient 4. Lymphocytic infiltration is seen with a predominance of mucus glands.

Treatment

In discussing the therapy of SS, one must separate the treatment of the sicca symptom complex from that of the associated disorder(s). The most effective method for helping patients with ocular symptoms is the instillation of tear substitutes into the conjunctival sac on an as-needed basis. Preparations containing methyl cellulose relieve symptoms and will help avert further desiccation and atrophy of the sensitive conjunctiva and cornea. For mild symptoms, two drops every four to six hours of such preparations as Artificial Tears or Liquifilm Tears may ease symptoms while more severe KCS requires hourly treatment. Eyeglasses also serve to protect the eyes from foreign bodies. No treatment except that directed towards symptomatic relief has been shown to be of objective value for the ocular symptoms. Yet patients should be referred to an ophthalmologist for slit-lamp examination and recommendations for further symptomatic relief.

"Once thought to be a disease of lymphocytic cellular infiltration, SS is now thought to represent a spectrum of immune dysfunction."

The oral complications of SS present a challenge for preventive care. The mouth should be kept as well lubricated as possible, and dehydration should be avoided. Chewing sugarless gum or the use of sour, sugar-free candies may serve as sialogogues, and may allay symptoms. It is important that the patient not chew gum containing sugar since this may aggravate the problem of dental caries, which is an all-too-common complication of SS. The patient must be instructed in proper oral hygiene that includes daily flossing, brushing after each meal, topical fluoride treatment, and regular visits to the dentist for early detection and treatment of any problems that might arise.

There is no substitute for sipping fluids throughout the day since desiccation enhances the development of calculi within the ductal system. If calculi develop, they should be promptly diagnosed and removed with every effort to preserve normal salivary tissue. Atropine derivatives, decongestants, antihistamines and other drugs that decrease salivary secretion should be used with the utmost caution.

Sudden enlargement of the salivary gland is often accompanied by pain and tenderness. Treatment with analgesics is usually all that is necessary, but in extreme cases, corticosteroids may be needed. Chronic salivary gland enlargement, on the other hand, seldom is symptomatic. Thus, surgical removal or radiation should be avoided as they further deplete the pool of viable secretory epithelium, and radiation increases the possibility of neoplasia.

The therapy of associated inflammatory conditions such as RA or SLE is indentical to that which would be used if SS were not present.

Should the patient with SS develop a neoplasm such as undifferentiated sarcoma, malignant lymphoma or the like, a referral to a hematologist/oncologist should be made so the proper chemotherapy and/or radio therapy can be instituted.

Since SS can present in numerous ways, and since it is a common problem, it should be considered in the middle-aged or elderly patient (with or without arthritis) if the patient, who is more likely to be female: complains of sudden loosening of dental fillings or appearance of carious teeth, dysphagia because of decreased salivation, persistent foreign body sensation in the eye(s), photophobia, and/or the accumulation of ropy, mucous conjunctival strands on waking. Of course, gross salivary gland pain and swelling is a more obvious and dramatic presentation, but this only occurs in about half the cases.

Hopefully, with earlier detection and therapy, SS sufferers might avoid some of the complications of

the disease. Should a complication such as neoplasia arise, early detection and treatment are the key for optimal results.

Though corticosteroids and immunosuppressive medications are effective in suppressing lymphocyte function, their use should be reserved for special cases such as life-threatening situations or major complications since the majority of SS sufferers are managed adequately with symptomatic treatment, thus avoiding unnecessary side effects that are all-too-commonly seen with these agents.

Disorders of immune function other than SS caused by senescence of the body's immunoregulatory systems are sure to be seen more commonly in the years to come, and will probably present themselves first to the primary care physician. It is he or she who must suspect such problems and take the necessary initial steps for diagnosis and treatment. It is our hope that this report will help our colleagues to understand Sjogren's syndrome and make them more aware of yet another family of illnesses that may potentially afflict our aging population, oftentimes in atypical fashion.

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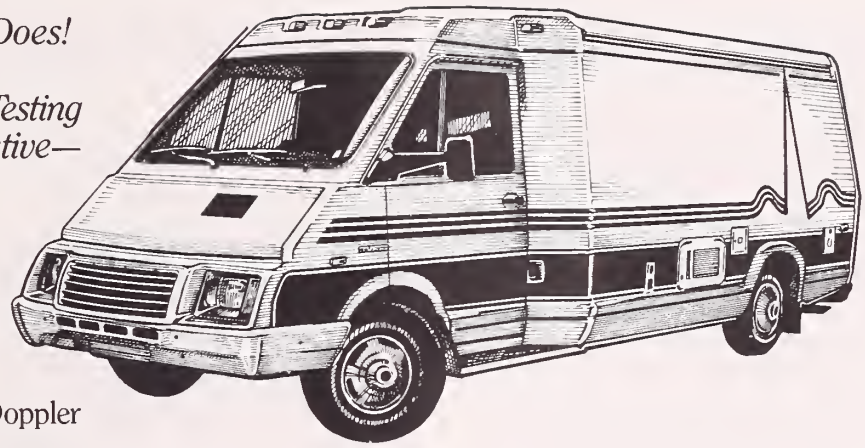

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President's Page

". . . in West Virginia as well as many other states, patients would not have access to many diagnostic and therapeutic activities if it were not for the initiative of many physicians to provide that service by private investment."

Quality, Accessibility and Cost

I just recently signed letters to each of our four Congresmen and our two Senators to register my opposition to the Stark bill, HR-939, which is an outright ban on certain physician referrals. Congressman Fortney (Pete) Stark (D-CA) introduced this bill as a means of preventing physicians from referring to any diagnostic or therapeutic entity in which they have a vested interest. Mr. Stark feels, and has said in public many times, that physicians have bilked Medicare out of tens of millions of dollars by ordering many unnecessary tests on patients, then referring them to labs and diagnostic units in which they have an ownership interest. This is, at times, referred to as "self referrals."

HSS Inspector General Richard P. Kusserow recently reported that 45 per cent more tests were ordered by physicians when they had a financial interest in the referral center. And, he felt that the government could save 28 million dollars a year by passing and enforcing the Stark bill.

What Congressman Stark and Mr. Kusserow do not tell you is that, in West Virginia as well as many other states, patients would not have access to many diagnostic and therapeutic activities if it were not for the initiative of many physicians to provide those services by private investments. And, if physicians, as private citizens, make an investment, should they not make a reasonable return on their money? Evidently there are those in Congress who do not think so.

When it comes to enacting laws, there are three words to which legislators respond, whether they be in Congress or in our state Legislature. Those words are "quality," "accessibility" and "cost." The Stark bill is designed to reduce "cost," but it does it with the sacrifice of "accessibility" and "quality," both of which are necessary for a good health care system.

We have an excellent health care system in our Mountain State. Except for certain special procedures (i.e. some transplants), all-inclusive, state-of-the-art medicine is practiced in West Virginia. Yes, we have a number of both large and small hospitals. Yes, we have excellent physicians and surgeons in all specialties. Yes, we have several CAT scanners, MRIs, cardiac cath units, mammogram units, and lithotripters, all serving our 1.9 million people.

There have been members of the state administration who have said that access to that care is the reason that medical costs are so high. I will not apologize for the ease of accessibility and the excellent quality of medicine that is practiced within our borders. Politicians must realize that quality, technical medicine does cost more, but that the return on saving lives and decreasing human suffering is well worth the investment.

As I have traveled all over this state this past year, I have looked carefully at medical care in our state, and I am proud of our health care system. I encourage each of you to write our Congressmen and Senators to express your opinions concerning current and future legislation. You can help make the difference and preserve our quality medical system for our citizens.

—Bill M. Atkinson, M.D.

Legal Malocchio

If an example were needed to illustrate what is wrong with the tort system in our country, we had it recently in a newspaper report out of neighboring Pittsburgh, Pennsylvania. A judge there sent a civil jury home without pay as a reprimand for bringing in a verdict which "...shocks our sense of conscience, of rightness..." It was not a medical malpractice case.

During an impromptu wrestling match at a fraternity party one student sustained a fractured ankle and sued the other combatant for damages. The jury, after hearing the case, decided to award no damages. The judge asked them to reconsider and sent them back to deliberate. They then decided to award $1,000 damages to be split between the two students whom they judged equally responsible.

The judge was enraged and is quoted, "A thousand dollars in the face of ten thousand five hundred and fourteen dollars of unquestioned medical bills and the pain and suffering is an outrage."

One of the dismissed jurors later said the jury found both students equally at fault and that no damages should be awarded, but "Apparently it was not proper procedure to say that people were negligent and find no dollar value."

The jury was clearly much more judicious than the judge. The judge clearly believes, along with too many of his judicial colleagues, that when damage occurs or suffering ensues, some party or agency must be at fault, and it is the court's role and duty to correct that damage and ease that suffering by extracting money somehow from someone and directing it to the sufferer and his attorney.

Life on the bench is simple under that rubric—suffering and damage weight the scales of justice in one direction, and a little gold from some source, any source, is needed to put things back into balance. Good sense is no part of these judicial scales. In these courts misfortune is never a matter of chance. Fault must precede misfortune, and liability, of course, follows. Chance, lot, bad luck, statistical inevitability and, as in this case, self-culpability are ludicrous rationalizations of some guilty, well-heeled or well-insured evil-doer out there.

It is the same line of reasoning well known in southeastern Europe which leads to the conclusion that someone has invoked "the evil eye" to bring on a misfortune. Someone or something under the control of someone surely caused the pain. It somehow seems more comfortable to them and to the judge to thus assign a cause-and-effect relationship even without much basis in observable fact.

The result of such distortions of justice is the present situation in which product liability insurance for many useful products has become unavailable, and the products have been removed from the market; other products have had their costs and selling prices doubled or tripled in order to cover product liability premiums; auto liability insurance premiums rivaling, and many times exceeding, the cost of the vehicle; political subdivisions altogether unable to afford liability insurance; seats on boards of directors of volunteer and charitable organizations unfilled for lack of officers and directors insurance; lifesaving vaccines and sera no longer manufactured in this country; highly useful but commercially limited drugs for rare diseases neither manufactured nor researched; total medical care costs driven upward by at least one third because of defensive medicine attempts to avoid even remote possibilities of liability; and medical school places going begging for a lack of applicants.

On the other side of the ledger, possibly seen as the plus side, we see thousands of students thronging into law schools eager to cash in on the suing bonanza; plaintiff attorneys rich as Croesus; defense attorneys not quite as rich; not-yet rich attorneys on TV ads trying to look honest while, appealing to greed, they encourage viewers to sue someone; and legislatures crammed with attorneys wearing straight faces in a shameful charade staunchly defending all this on the grounds they are protecting a citizen's access to the courts.

The fault is with the judiciary itself, in its rules, its interpretation of the rules, in what judges permit or exclude as evidence, in what the courts allow to be entered as a suit. Frivolous suits with no other purpose than legal extortion in the form of a settlement less than the cost of winning the suit for the defendant are taken seriously by judges rather than being thrown out and their authors reprimanded.

Who can blame even those attorneys possessed of an honest character for taking advantage of the opportunities presented by such as the judge in Pittsburgh?—SDW

Our Readers Speak

Patient Instruction Questioned

It was a pleasure to read the Grand Rounds in the May issue of the *West Virginia Medical Journal,* but as a certified allergist who has practiced in this state for over 35 years, I must disagree violently with the patient instruction, particularly with the last paragraph, which states "Finally, the patient should be referred to an allergist for the difficult decision about whether to initiate desensitization injections." I note particularly that all of the references except the one from Lindzon are quoting from 1980 to 1987, and none of the most recent references is related to the problem of stinging insects.

If the gentleman whose case was described on Page 189 had had a self-administering epinephrine syringe in his home, one might have found him in his home dead or near death with the syringe in his hand, or perhaps this might have happened on his way into the house. The statement, "Generalized urticarial reactions and large local reactions indicate sensitizations to the venom and the potential for a fatal reaction to the next exposure," should not be accepted at face value. Many patients who get generalized urticarial reactions or large local reactions may not have the potential for the fatal reaction on the next exposure.

Referral to an allergist should not be the final thought as regards the patient who is potentially at risk for anaphylactic reaction. These individuals should be evaluated by a competent allergist with experience. The decision whether to initiate desensitization injections is really not that difficult.

I fear that people who work in emergency rooms follow the usual pattern expressed in this article. In consequence, they do not know the value of desensitization, and the experience of emergency room physicians may not permit them to make an adequate evaluation.

Let me refer the reader to "Current Therapy in Allergy, Immunology, Rheumatology," Vol. 3, Page 1. In this article, Professor Lichtenstein writes "I have no hesitation in recommending therapy to anyone with a serious systemic reaction. We recommend that all adults who have respiratory or vascular manifestations receive immunotherapy." In the same issue, Professor Reisman states in the second article, "Insect Stinging Allegy in Children" (Page 88), "The current recommendations are to administer venom immunotherapy to individuals who have a history of sting anaphylaxis and have a venom specific IgE, detected by skin testing or in the serum by the RAST."

Both of these articles have tables illustrating the indications for venom immunotherapy that I am sure would be interesting.

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Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

1. Ann Intern Med 1982;96:766-71.

ARMY RESERVE MEDICAL PROFILE NO.9

Dr. Holwick outside of hospital where she practices as a civilian traumatologist.

Dr. Holwick in operating room at Letterman Army Medical Center.

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Captain, U.S. Army Reserve.

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OUTSTANDING ACHIEVEMENTS Borden Freshman Prize; Alpha Lambda Delta; Phi Beta Kappa; Phi Kappa Phi; Bovard Award; ALD Award; American Institute of Chemists Medal Award; Summa Cum Laude, University of California; Alpha Omega Alpha.

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"As a Reserve physician, I've had the opportunity to interact with different people, from various backgrounds, with assorted medical and social viewpoints. As a result, I've grown as a physician and as a person.

"I spent six months looking into the Army Reserve program before I joined, wanting to make sure that my skill and time would be put to good use. I've been a Reservist three years now, and I still find it extremely rewarding. I have the satisfaction of knowing that I'm serving my country."

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1. Data on file, Lilly Research Laboratories.

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AXID®

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Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer in most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General* — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that < 0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified Poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP [013089]

Additional information available to the profession on request.

A Continuing Medical Education Event!

122nd ANNUAL MEETING of the *West Virginia State Medical Association*

The Greenbrier

AUGUST 15-20, 1989

JOINT-SPONSORS

West Virginia University School of Medicine

Marshall University School of Medicine

COMPLETE PROGRAM WILL APPEAR IN AUGUST ISSUE OF *THE JOURNAL*

PROGRAM COMMITTEE: Michael J. Lewis, M.D., of Morgantown, Chairman; and Drs. James L. Bryant of Clarksburg, C. Richard Daniel of Beckley, Derrick L. Latos of Wheeling, Michael A. Morehead of Parkersburg, Maurice A. Mufson of Huntington and Stephen L. Sebert of Lewisburg.

REGISTRATION FEE is $25 for WVSMA members and $150 for non-members. Please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Information relative to the number of Category 1 CME credit hours approved for the meeting will be publicized in an upcoming issue of The Journal and WESGRAM.

PLAN NOW TO ATTEND

Return to:
WVSMA
P. O. Box 4106
Charleston, WV 25364

I am a member of the WVSMA. Please register me for its 122nd Annual Meeting in White Sulphur Springs, WV, August 15-20, 1989. My $25 registration fee, made payable to the WVSMA, is enclosed.

Name (please print) _____ Specialty _____

Address _____ City _____

Disease Prevention Convention Subject

"Disease Prevention in the Practice of Medicine" will be discussed by Theodore A. Kotchen, M.D., of Morgantown during WVSMA's Annual Meeting.

Doctor Kotchen, Professor and Chairman, Department of Medicine, West Virginia University School of Medicine, will speak during the third and final general scientific session Saturday morning, August 19.

The convention will be held August 16-19 at the Greenbrier, beginning Wednesday afternoon, August 16, with the opening session of the House of Delegates.

Also scheduled Saturday, as announced previously, will be talks on "The Role of Campylobacter pylori in Gastritis and Peptic Ulcer Disease," T. Ulf Westblom, M.D., and "Magnetic Resonance Imaging," E. Ralph Heinz, M.D.

Doctor Westblom is Assistant Professor of Medicine, Section of Infectious Diseases, Marshall University School of Medicine, and Doctor Heinz is Professor and Chief, Neuroradiology Section, Department of Radiology, Duke University Medical Center.

Scientific sessions also will be held Thursday and Friday mornings.

The convention program will include a keynote address Thursday morning, section and specialty society meetings primarily on Friday, and the second House session Saturday afternoon. A presentation on computer diagnostics is being planned for Friday afternoon.

On Kentucky Faculty

Doctor Kotchen, born in Hartford, Connecticut, also is Professor of Physiology at WVU. He came to WVU from the University of Kentucky where he was Professor of Medicine; Chief, Division of Endocrinology-Metabolism; Acting Chief, Divison of Nephrology, and Professor of Physiology.

Theodore A. Kotchen, M.D.

He is a member of the Data Safety and Monitoring Committee, National Institutes of Health Trial of Hypertension Prevention; Fellow of the American Heart Association Council for High Blood Pressure Research, Medical Advisory Board, a member of the Board's Executive Committee, and Chairman of the Board's Professional Education Committee.

Doctor Kotchen also is a member of the American Heart Association's Nutrition Committee, and serves on the Board of Directors, American Heart Association, West Virginia Affiliate.

He is Associate Editor for the Journal of Clinical Hypertension, on the Editorial Board of American Journal of Kidney Diseases Hypertension, and an ad hoc reviewer for a number of scientific publications.

Doctor Kotchen was graduated from Harvard College, and received his M.D. degree in 1964 from Western Reserve. He interned and completed a residency in medicine at North Carolina Memorial Hospital in Chapel Hill, continued his residency in medicine at University Hospital in Cleveland, Ohio, and held a fellowship in endocrinology-metabolism at Yale-New Haven (Connecticut) Hospital.

He was on the teaching staff at Georgetown University School of medicine for two years before going to the University of Kentucky in 1974.

Doctor Kotchen is the author or co-author of 138 articles, 13 book chapters and invited reviews, five edited references, and 154 abstracts.

AMA Trustee to Speak

Rufus K. Broadaway, M.D., of Miami, Florida, as announced earlier, will address the first session of the House. An AMA Trustee, Doctor Broadaway is senior Vice President of Medical Affairs at Cedars Medical Center in Miami. "Quality Initiatives on Two Fronts" will be the title of his address. He'll be speaking in the place of the AMA President, Alan R. Nelson, M.D., who will be out of the country at that time.

Other speakers and topics announced earlier are:

Thursday: "The Doctor and the Politician," The Honorable William A. Sederburg, Chairman, Michigan Senate Health Policy Committee;

Friday: "Lyme Disease: The Latest Great Imitator," Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, WVU Health Sciences Center, Morgantown;

"External Influences on the Practice of Medicine," Robert W. Cantrell, M.D., Fitzhugh Professor and Chairman, Department of Otolaryngology-Head and Neck Surgery, University of Virginia;

"Allergy-Free, Non-Toxic Environment: The Effect of the Built Environment on Our Health," Robert J. Kobet, AIA, Butker, Pennsylvania.

Members of the 1989 Annual Meeting Program Committee are Drs. Michael J. Lewis, Morgantown, Chairman; James L. Bryant, Clarksburg; C. Richard Daniel, Beckley; Derrick L. Latos, Wheeling; Michael A. Morehead, Parkersburg; Maurice A. Mufson, Huntington, and Stephen L. Sebert, Lewisburg.

Cabell Doctor Literacy Honoree

Marguerite (Stemmie) Stemmermann, M.D., of Proctorville, Ohio, a retired member of the Cabell County Medical Society, has been honored by West Virginia Laubach Literacy Action.

Doctor Stemmermann, a tutor with the Tri-State Literacy Council, has been named the West Virginia Laubach Literacy, 1989, Volunteer of the Year.

Goodwill Industries, in Huntington, recently honored her with an award of appreciation for her "untiring efforts to improve reading skills" of their clients.

Doctor Stemmermann retired from the John Marshall Medical Services in Huntington two years ago and promptly began work with the literacy council in Cabell County.

"The inability of too many patients to read directions on bottles of prescribed medicine or simple instructions regarding basic nutrition and hygiene stimulated her interest," said Sally K. Adkins, Interim Coordinator for the Council. "Too often, educational leaflets for patients with diabetes, epilepsy and other diseases are 'all Greek' to the functional illiterate.

"Doctor Stemmermann highly recommends "LITERACY" as a second career for retiring physicians, a field in which a doctor's expertise in record keeping and awareness of patients' problems can be invaluable."

Doctor Stemmermann has received letters of commendation from Governor Caperton and Barbara Bush.

Wheeling Site For New PT Program

Competition for new health care graduates is hot and heavy nationwide. There just aren't enough technologists, nurses and therapists to go around.

Charleston Area Medical Center and Wheeling Jesuit College have set about creating a cure for West Virginia's chronic shortage of registered physical therapists. This fall, Wheeling Jesuit will christen a new physical therapy training program. CAMC will be one of the school's prime clinical training sites, according to Father Tom Acker, S.J., college President.

"In four years' time we'll graduate our first class of 18 to 20 PTs," he said. "We'll bias our admissions to West Virginia students and we'll be returning people to their hometown—or at least near their home area—to do their clinical rotations.

"That makes students more comfortable. And that's where they're likely to take a job," he said.

To help, the medical center will provide housing, clinical training and some scholarships for junior and senior PT students, according to Diana McClure, Administrative Assistant in charge of Mecical Rehabilitation.

The state's PT shortage hasn't resulted from a lack of interest, according to Acker and McClure. There are plenty of students interested in the field; there just weren't enough spaces in the state's baccalaureate programs.

"Right now, there's only one PT program in the state—that's at WVU. They train 18 to 20 PTs every year. The state's health care system needs 40. Opening another program like Wheeling Jesuit's is critical just to meet the needs in our own state," she said.

Speakers, Special WVSMA House Session

Ile

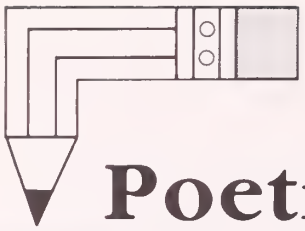
Richardson

Simpson

SB-576, the Health Care Cost Containment Act enacted by the 1989 state Legislature, was dissected at a special session of the WVSMA House of Delegates called for that purpose in Clarksburg May 21. (See WESGRAM, May 25.) The three principal speakers were, from left, Mike Ile, Division Counsel, Health Law, American Medical Association, Chicago; Sally Richardson, Director of the state Public Employees Insurance Agency, and Melody A. Simpson, Charleston attorney who helped lobby the Legislature on behalf of WVSMA. Some 50 delegates attended the informational meeting concerning the controversial legislation.

Nutrition and AIDS

Acquired Immune Deficiency Syndrome (AIDS) will continue to be a growing health concern as we enter the 1990s. While scientists search for a cure, nutritionists are focusing on minimizing the side effects and discomfort that result as the disease progresses. In a position statement published in the June issue of the *Journal of the American Dietetic Association* (JADA), The American Dietetic Association (ADA) states that nutrition care and education should be an essential part of the total health care provided to HIV-infected patients.



Poetry Corner

'Jot It Down'

I've left so many things unsaid
Or, my regret, unwritten about,
That when first thought inside my head
Seemed wise beyond a doubt,
That I determined day and night
To keep pen and paper by my side,
And train myself to write,
To "jot it down,"
Those gems of truth and verity.

"Jot it down" became my password,
And even just before I slept
I would murmur "jot it down"
In order to preserve what crept
Into my sleeping brain.

The first night of this new regime
I slept and in a dream
Some wondrous thoughts and new ideas appeared.
In my sleep, with pen in hand,
Dutifully I followed my plan
To "jot it down."

In eagerness at morning's light
To see discoveries I might
Have made of basic philosophic truths,
I grabbed the writing pad beside my bed
To see what wisdom I had found,
And on the pad was clearly lettered
"Jot it down."

Robert L. Smith, M.D.
Morgantown

A Sleepless Night

The darkness of the night
Surrounds my thoughts
As sleepless on my bed I lie
With fleeting glimpses
Of my life,
From childhood on,
Moving through my mind
And keeping me awake.

The longest hour is that
Between the striking of the clock
At three and four.
The silence of the night
Is magnified a hundred times
Till other sounds,
Like raindrops on the roof,
Are welcomed as a friend
To break the solitude.

I cannot sleep,
I do not know the reason why,
Until the morning light
Is filtered to my eyes
And thoughts are stilled.
Then sleep does come
For just the briefest time
Before the day and duty call.

E. Leon Linger, M.D.
Buckhannon

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

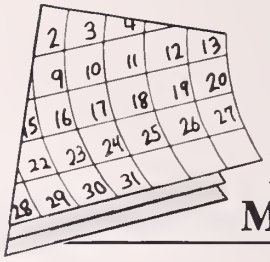
Special House Session Called July 9

A special meeting of the WVSMA House of Delegates was called as this issue of *The Journal* went to press. The special session will be held Sunday, July 9, in Charleston at 1:30 P.M. in the West Virginia University Medical Center Auditorium.

The special session was called at the request of more than 50 members of WVSMA from Kanawha and Mercer county medical societies to further address the effects of Senate Bill 576, the Omnibus Health Care Act.

Four resolutions with reference to the compromise achieved in passage of SB-576 have been received by WVSMA.

The House also met May 21 in Clarksburg for informational purposes regarding SB-576. (See WESGRAM, May 25.)



Medical Meetings

July

9—Special Session, WVSMA House of Delagates, Charleston.

9-14—AMPAC Campaign Management School, Washington, D.C.

16-22—10th World Medicine Games, Montreal.

12—WVSMA Office Personnel Loss Control Seminar, Morgantown.

25-29—Assoc. of Philippine Physicians in America, St. Louis, Mo.

August

15-20—122nd Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

2-3—Philippine Medical Assoc. of WV, Charleston.

11-14—Am. College of Emergency Physicians, Washington, D.C.

18-21—Am. Academy of Family Physicians, Los Angeles.

21-23—Am. Academy of Facial Plastic & Reconstructive Surgery, New Orleans.

21-23—Assoc. of Am. Physicians & Surgeons, Orlando, Fla.

21-23—Am. College of Nuclear Medicine, Chicago.

24-27—Am. Neurological Assoc., New Orleans.

October

4-5—National Political Education Conference, Washington, D.C.

5-6—Am. Academy of Pediatrics, Atlanta.

15-20—Am. College of Surgeons, Atlanta.

19-21—Hal Wanger Family Practice Conference, Morgantown.

19-22—Am. Society of Internal Medicine, Washington, D.C.

November

4—AMPAC Candidates Workshop, St. Louis.

5-8—Southern Medical Assoc., Washington, D.C.

12-17—AMPAC Campaign Management School, Washington, D.C.

December

3-6—AMA Interim Meeting, Honolulu.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Brownsville, PA, ★ General Hospital, 11 A.M.—July (no program)

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—July 19, Dysfunctional Uterine Bleeding & Perimenopausal Bleeding: When to do suction aspiration & when to do D & C (speaker tba).

Fairmont, ★ General Hospital, 8:15 P.M.—July (no program)

Grantsville • Calhoun General Hospital, 1 P.M.—July 10, Fibrocystic Disease, G. Cendana, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—July (no program)

Logan, • General Hospital, 11:30 A.M.—July 21, Organ Transplantation Update, E. Hodge, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—July 18, Fibrocystic Disease, G. Cendana, M.D.

Martinsburg, ★ V.A. Medical Center, 2 P.M.—July (no program)

Montgomery, • General Hospital, 12 P.M.—July 5 (tba)

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Workup of Pelvic Pain, Douglas Glover, M.D.

Parkersburg, ★ Camden-Clark Hospital 7 A.M.—July (no program)

Ripley, • Jackson General Hospital, 12:30 P.M.—July 14, Update on TIAs, A. Poffenbarger, M.D.

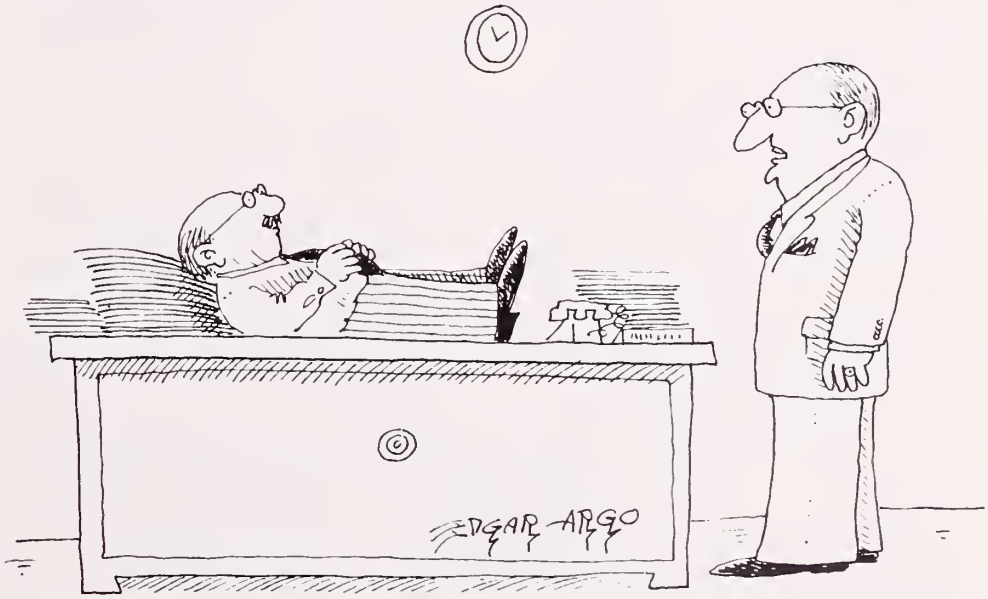
Spencer, • Roane General Hospital, 12:30 P.M.—July 18, Vascular Surgery Update, A. AbuRahma, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—July (no program)

Weston, ★ Stonewall Jackson Hospital, 6:30 P.M.—July (no program)

Leaders' Training

A FREEDOM FROM SMOKING Clinic Leaders' Training will be conducted in Charleston by the American Lung Association of West Virginia August 15-16. This one and one-half day training will provide the necessary skills for the trainees in leading this seven-session smoking cessation program, helping smokers successfully give up their habit. Ex-smokers are preferred as clinic leaders, but nonsmokers are also encouraged to register.



"When you can spare a few minutes Bromwell, I'd like to discuss those tranquilizer's your doctor has you on."

Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

BCG Bladder Cancer Treatment Better

Research on treatments for bladder cancer has shown Bacillus Calmette Geurin (BCG) immunotherapy to be superior to chemotherapy with Adriamycin. BCG, a tuberculosis vaccine, also appears to be better in the treatment of certain kinds of bladder cancer.

Donald L. Lamm, M.D., Chair of the Department of Urology, was principal investigator on the three-year study by the Southwest Oncology Group, which began in 1983 and used data obtained from nearly 250 patients in 46 medical institutions in the United States.

Doctor Lamm presented the results of the study at a meeting of the American Society of Clinical Oncologists in San Francisco in May.

FDA Approval Sought

Two weeks earlier, when he presented the results at a meeting of the American Urological Association in Dallas, some 3,000 urologists from across the country signed a petition for immediate approval of BCG by the Food and Drug Administration, which has been reveiwing it since March of 1987.

Doctor Lamm said the study suggests that the majority of patients tolerate BCG as well as Adriamycin, and that BCG is among the best agents currently available.

"During the randomized trial, tumor recurrence in patients treated with Adriamycin was 79 per cent, and time to recurrence averaged 10 months. With BCG, tumor recurrence was 57 per cent with a time-to-recurrence average of 22 months.

"In treating carcinoma in situ, a particularly aggressive form of bladder cancer, 71 per cent of patients responded with complete disappearance of cancer when treated with BCG, compared with 47 per cednt of those treated with chemotherapy.

"Increasing disease was found in only 15 per cent of the BCG-treated patients, compared with 37 per cent of the Adriamycin-treated patients."

BCG was orginally developed in France in 1921 by Calmette and Geurin. In addition to protecting from the ravages of turberculosis, it profoundly stimulates the immune system.

"In the 1950s, based on this immune-stimulating effect, doctors investigated the activity of BCG in the treatment of cancer in animals," Lamm said. "Later trials in patients with bladder cancer have resulted in what now appears to be the most effective form of treatment of this malignancy, which is the fifth most common type of human cancer."

Cervical Cancer Grant Received

WVU's Mary Babb Randolph Cancer Center has received a grant of $713,000 from the National Cancer Institute (NCI) for a three-year project to help reduce deaths from cervical cancer among low-income women in southern West Virginia.

Deaths from cervical cancer among West Virginia women are the highest in the nation. While the national average is 4.2 deaths annually per 100,0000 women, the state average is 6.8, more than 50 per cent higher.

In one southern county, the rate is 14.5 deaths annually per 100,000 women.

The Cancer Center's project will be conducted in Fayette, Logan, McDowell, Mercer, Mingo, Monroe, Summers, Raleigh, and Wyoming counties.

Project leaders are Bill Carlton, Director of Cancer Control for the Cancer Center, and Professor of Community Medicine, and Kenneth Simon, Associate Professor of Community Medicine.

Carlton said the project will take advantage of community networks and relationships with local health care providers already established in another WVU project in the same region.

Asbestos Education Program Praised

WVU has won national acclaim for its continuing education program to train and certify individuals in asbestos abatement.

The National University Continuing Education Association and the American College Testing Program chose WVU for their 1989 Innovative Award for instructional programs.

R. Rudy Filek, Dean of WVU's Center for Extension and Continuing Education, received the award at NUCEA's recent national conference in Salt Lake City, Utah.

The asbestos program was presented in five West Virginia cities last year. It prepared and certified nearly 300 public school workers, private contractors, building inspectors and management planners to conduct federally mandated asbestos abatement programs.

Health Careers Student Seminar

Middle school students from throughout West Virginia are invited to participate in a two-day seminar on careers in the health professions at WVU Health Sciences Center, July 27-28.

The seminars, which have been held each year since 1981, bring highly promising seventh, eighth and ninth graders to WVU for an introduction to the range of health professions. The students attend workshops with faculty and staff in the WVU Health Sciences Center and learn what high school classes they'll need to enter college programs in the health fields.

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MU School Of Medicine News

MARSHALL UNIVERSITY

Compiled from material furnished by the Office of University Relations, Marshall University.

Residents Plugged Into Rural Life

MU School of Medicine has received a three-year, $185,000 grant from the Public Health Service to create an innovative program designed to encourage new doctors to work in rural communities.

The project will put Marshall's family practice residents out in a rural community for two months, treating patients and learning more about rural communities.

"We already have our residents seeing patients in rural communities, but this program opens up a completely new dimension," said Robert B. Walker, M.D. "In a sense, it breaks down the clinic walls and plugs these doctors into the community at several different levels.

"We're going to have them going to local schools, the county health department and water company, and workplaces like coal mines, farms and saw mills," he said.

Doctor Walker, who is the project Director and Chairman of Marshall's Department of Family and Community Health, said the program is designed to accomplish two things.

"First, we think these residents will be better doctors if they understand their patients' life styles and workplaces, and if they see the 'big picture' in terms of the health problems in the community as a whole," he said.

"Second, we want these doctors to become bonded to a rural community so they'll want to practice in one, and we want to give them the skills which make them confident that they can."

Six residents a year will participate in the program, which will be based at the Lincoln Primary Care Center, a Marshall-affiliated clinic in Hamlin. Residents will spend half of their time at the clinic treating patients and the other half participating in the community program.

Gerry Stover, Exexcutive Director of the Lincoln Primary Care Center, will be the program Coordinator, and Dan Peterson, M.D., of the Marshall medical faculty will be the physician Director.

Doctor Walker said the program, though smaller in scale, should provide some of the same benefits provided by Marshall's unique Combined Residency/Practice Program, which last year was named the Outstanding Rural Health Program of 1988 by the National Rural Health Association.

"In both programs, the key is making the doctor a part of the community," he said.

Some of the benefits of Marshall's award-winning Combined Residency/Practice Program are expected to carry over to all family practice residents through an innovative two-month rural rotation being established under a $185,000 grant from the Public Health Service. Here, a Lincoln County youth is examined by Dan Peterson, M.D., a Marshall faculty member who has completed the Combined Residency/Practice Program, and Robert Walker, M.D., Chairman of the Department of Family and Community Health. (Photo by Ric MacDowell)

'Hypertension Sunday' In Black Community

Thanks to the combined efforts of two departments of MU School of Medicine, the Ebenezer Community Outreach Center and the Black Ministerial Association, May 21 was "Hypertension Sunday" in Huntington's Black Community.

The highly successful program is believed to be only the second of its kind in the nation.

During the morning worship services of six major black churches, doctors and medical staff from Marshall presented brief "mini-sermons' on the special risks black people face from hypertension, according to Karen Mulloy, M.D., and instructor in Marshall's Department of Family and Community Health, and Medical Director of the Ebenezer Community Outreach Center.

With help from church volunteers, the Marshall doctors, after the services, took blood pressure readings, gave out educational materials, and made recommendations for follow-up testing or treatment.

Doctor Mulloy believes the individualized counseling and recommendations set this program apart from many screening programs. "So often, people get their blood pressure checked at the mall or someplace, but they don't know what to do next if their blood pressure is high," she said.

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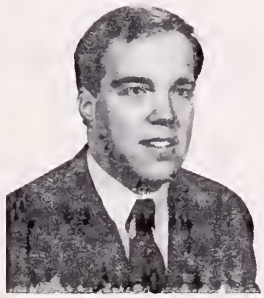
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Judith Kemp, M.D.
Camden-Clark Memorial Hospital
800 Garfield Avenue
Parkersburg, WV 26101

Students
Katrina M. Brown
1616 Spring Valley Drive #3
Huntington, WV 25704-9364

Obituaries

JACK BASMAN, M.D.

Dr. Jack Basman, a longtime Charleston pediatrician who left private practice for a second career in the state Health Department, died May 12 in a hospital there. He was 80.

Doctor Basman retired only two years ago as Director of the Maternal and Child Health Division of the Health Department.

He had a private practice for 30 years, beginning in Charleston in 1938 and interrupted by fours years of service with the Navy starting in 1942. Following his return, he continued his practice until 1969.

Doctor Basman began work with the Health Department as a part-time consultant in 1963 and went full time several years later.

Born in New Jersey, he was graduated from West Virginia University, and received his M.D. degree in 1934 from Washington University in St. Louis. He interned in Baltimore, completed a residency at St. Louis Children's Hospital, and a fellowship in London, England.

He was a Diplomate of the American Board of Pediatrics and a Fellow of the American Board of Allergy.

Doctor Basman was an honorary member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Esther Eunitz Basman; three daughers, Judith VanGinkel, Cincinnati; Lynn Gottlob, Cleveland, Ohio, and Robin Durrett, Beckley; and a sister, Alice Gordon, Washington, D.C.

PAUL C. SOULSBY, M.D.

Dr. Paul C. Soulsby, retired St. Albans surgeon, died May 11 at his home. He was 77.

Doctor Soulsby was a former Chief of Staff of Thomas Memorial Hospital in South Charleston, and former athletics physician for St. Albans High School.

He was graduated from the former New River State College in Montgomery, and received his M.D. degree in 1938 from the Medical College of Virginia. He interned and completed his residency at the Baroness Erlanger Hospital in Chattanooga, Tennessee.

Doctor Soulsby was an honorary member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association. He was a Diplomate of the American Board of Abdominal Surgeons, and a Fellow of the International College of Surgeons.

He was a World War II Army veteran.

Survivors include the wife, Mrs. R. Deane Soulsby; two sons, Dr. M.E. Soulsby, Little Rock, Arkansas, and Gary P. Soulsby, Seattle, Washington; two daughters, Mrs. Ann Wright, Rochester, Michigan, and Mrs. Paula Meehling, Ona; and a brother, John L. Soulsby, Pratt.

County Societies

McDOWELL

The McDowell County Medical Society met May 8 in Welch at the Bonanza Restaurant.

William Harden, M.D., of Bluefield spoke on "Treatment of Dysarrhythmias."

Old business and new business were discussed.

Notice was given of our number of WVSMA delegates and alternates being cut from three to two.—Jeffrey P. Palmer, M.D., Secretary.

MONONGALIA

David Yoder, Chairman of the Monongahela Valley Expressway, was guest speaker for the meeting of the Monongalia County Medical Society May 2. He spoke on future transportation routes to and from Morgantown.

Roger E. King, M.D., WVSMA Councilor, reported on Council activities, especially regarding the Omnibus Health Care Act.

The Society discussed getting members elected to the state PPO Board, and Jim Arbogast, M.D., President, was authorized to nominate prospective members to the Board.—Robert L. Murphy, Executive Secretary.

WESTERN

The Western Medical Society met May 9 in Ripley at McCoys Motor Lodge.

Guest speaker was Elizabeth Funk, M.D., of Charleston Area Medical Center, Infectious Diseases, who gave a very comprehensive lecture on nosocomial pneumonia.

There was discussion on fees paid to physicians with whom Ravenswood Aluminum Corporation is seeking preferred payment arrangements. The Society approved an agreement with Ravenswood Aluminum.—A. H. Morad, M.D., Secretary.

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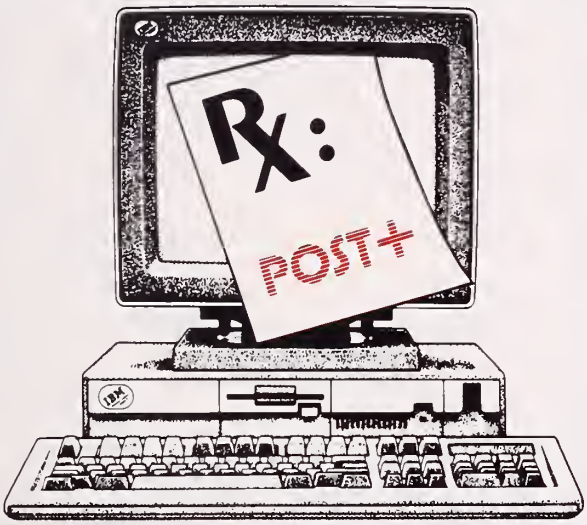

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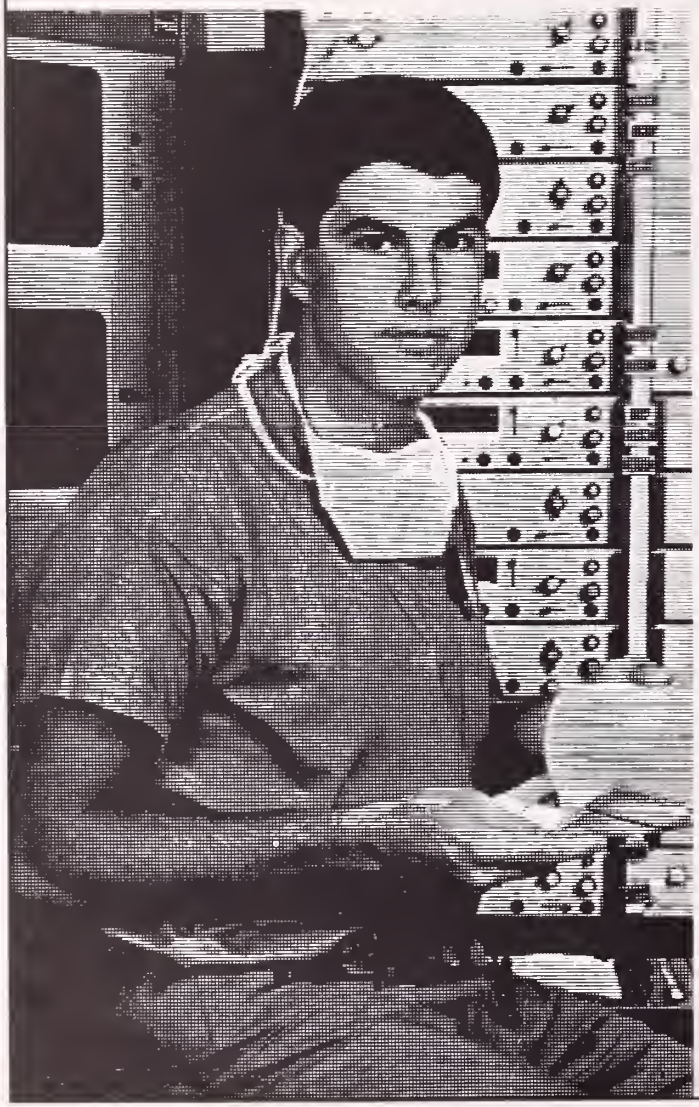

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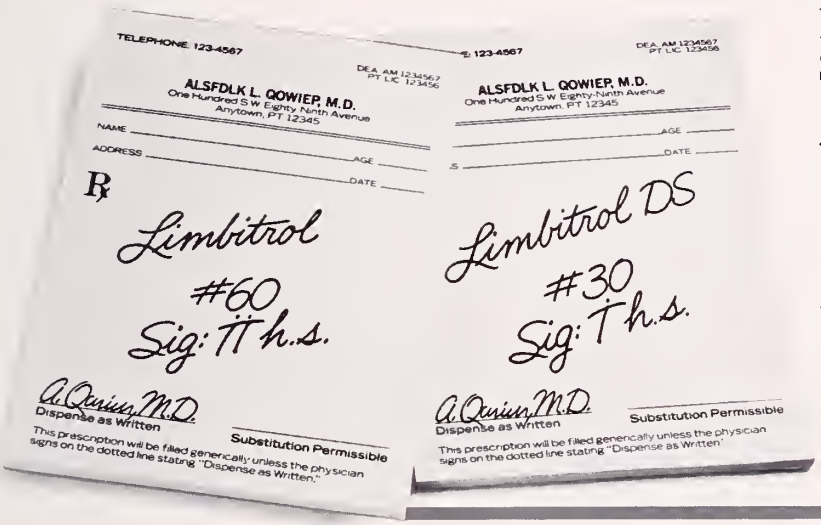

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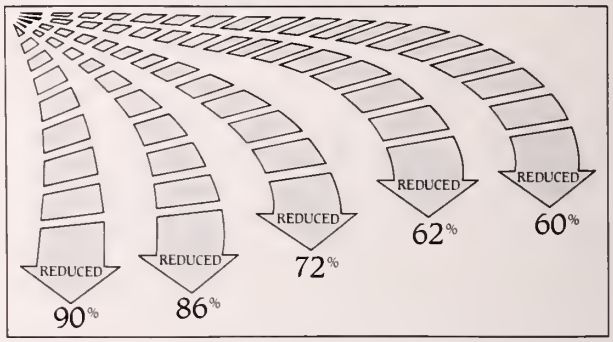

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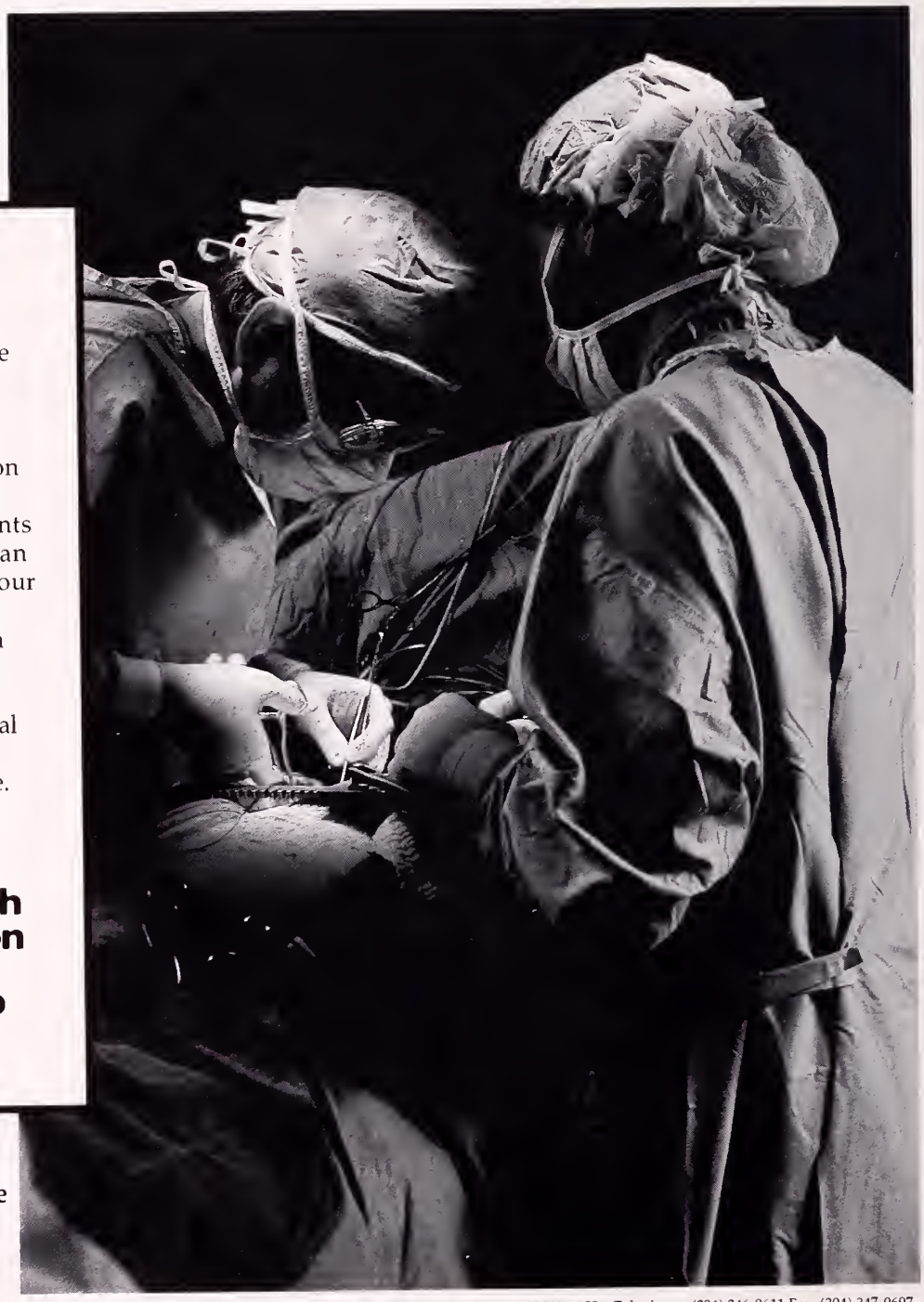

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA
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USPS 676 740
ISSN 0043 - 3284

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Sunset scene on the Kanawha River in downtown Charleston as hundreds of boats, viewed by thousands of people on both banks, gather for the annual Sternwheel Regatta beginning in late August and continuing through Labor Day. Photo courtesy of West Virginia Department of Commerce. Ron Snow, Photographer.

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Recent Increase in Incidence of Acute Rheumatic Fever in Southern West Virginia

JOHN M. ECKERD, M.D.
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JAMES E. McJUNKIN, M.D.
Associate Professor and Chairman, Department of Pediatrics, WVU School of Medicine-Charleston Division

Rheumatic fever appeared to decline in the United States in the 1970s and early 1980s. In the last two years, however, there have been multiple reports of the resurgence of rheumatic fever. Two of these reports originated in states that border West Virginia. This study demonstrates that there has been a similar outbreak in the southern part of West Virginia in 1988.

In addition, it appears that the incidence of first-attack heart damage is high, and that physicians should maintain their vigilance in diagnosing and treating acute rheumatic fever.

Reports in the literature in the last five years have emphasized the decline and near disappearance of acute rheumatic fever in the United States (1, 2). Also, recent articles have called for a less strict policy concerning diagnosis and treatment of pharyngitis (3). Since 1986, however, there have been three major reports of the resurgence of acute rheumatic fever in Utah and two states which border West Virgina—Pennsylvania and Ohio (4, 5, 6). In 1988, the Morbidity and Mortality Weekly Report added two other significant outbreaks to the list, one at a Naval Training Center in San Diego, California (7) and another at Fort Leonard Wood, Missouri (8). We report another outbreak, although smaller, in the southern part of West Virginia, occurring in 1988.

Methods

Charleston Area Medical Center consists of three geographically separate divisions in the city of Charleston: Memorial Division, an adult medical hospital; General Division, a mixed adult and pediatric surgical and trauma center; and Women & Children's Hospital, caring primarily for obstetric, gynecologic, and pediatric patients. The population served by adult cardiology at the Memorial Division is approximately one million people. The pediatric cardiology referral base of Women & Children's Hospital is somewhat smaller at approximately 250,000 patients. Because of the increase in reports of rheumatic fever around the United States, the recognition of cases of rheumatic fever may have been somewhat higher than in previous years. The impression early in 1988 among both faculty and house staff was that rheumatic fever had increased in the population seeking services at our hospital center.

"It appears that the incidence of first-attack heart damage is high, and that physicians should maintain their vigilance in diagnosing and treating acute rheumatic fever."

Medical records of all patients carrying the diagnosis of rheumatic fever, including young adults, were reviewed for a period from 1982 to 1988. Review of charts prior to 1982 was more difficult because careful computer records of coded diagnoses were not kept before that year. Also, many hospital charts had been retired to microfilm. Fifteen patients whose charts satisfied the modified Jones criteria for diagnosis of acute rheumatic fever (9) were identified over that period of time. All cases came from either the Memorial Division (adult medical hospital) or Women & Children's Hospital. There are three other adult medical-surgical hospitals in the city, but patients perceived as having significant pediatric disease are usually referred to Charleston Area Medical Center. ASO titer and sedimentation rate were performed on all 15 patients using standard methods. CRP titer was performed on four of 15 patients. Thirteen of 15 patients had 12 lead electrocardiograms, and 11 of 15 patients underwent Doppler echocardiography.

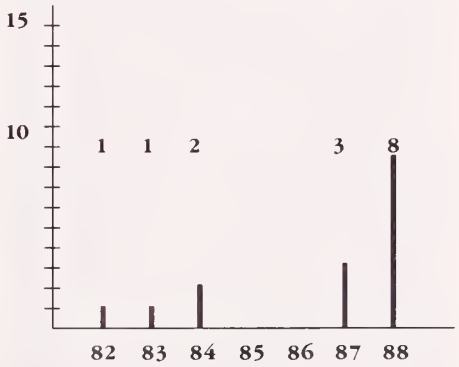

Figure. Cases of rheumatic fever or recurrences at Charleston Area Medical Center from 1982-1988.

Results

From 1987 to 1988 there was nearly a threefold increase in the number of cases of rheumatic fever diagnosed and treated at Charleston Area Medical Center (Figure). No cases were found for the years 1985 and 1986. It is possible that there were single cases in those two years that were missed in the code search, but a careful search was made and it is not felt that many cases could have been overlooked.

Age, sex, and race data are reviewed in Table 1. The patients' ages ranged from four years to 48 years (mean 17.8). Although the oldest patient was 48 years of age, there were only three patients over the age of 30. In the past, it was thought that rheumatic fever was a disease of low-income families, but our data and that of the Pennsylvania and Ohio groups indicate the contrary. Financial analysis demonstrated that 14 of 15 patients either supported their hospitalizations through private payment and were gainfully employed, or had insurance through employment. Only one of 15 patients was classified as "indigent."

TABLE 1
Data on 15 Patients With Rheumatic Fever

AGE: 4-48 years (mean 17.8; 12 under 30 years, 3 over 30)

SEX: 7 males (47%), 8 FEMALES (53%).

NO. OF RECURRENCES: 2 (13%)

RACE: 14 whites, 1 black

FINANCIAL DATA: private pay or insurance 14 (93%), indigent 1 (7%)

TABLE 2
Major Manifestations in 15 Patients With Rheumatic Fever

One Major Manifestation	
Arthritis	15/15 (100%)
Carditis	11/15 (73%)
Erythema Marginatum	2/15 (13%)
Subcutaneous Nodules	1/15 (7%)
Chorea	0/15 (0%)
Two Major Manifestations	
Arthritis and Carditis	11/15 (73%)
Arthritis and Erythema Marginatum	2/15 (13%)
Arthritis and Subcutaneous Nodules	1/15 (7%)

(One patient had arthritis, carditis, erythema marginatum, and subcutaneous nodules.)

Clinical Findings

Major manifestations in the patients of this series are presented in Table 2. All patients (15/15) had definite migratory polyarthritis during their illness. Eleven of 15 (73 per cent) manifested evidence of carditis, either by physical findings or by Doppler echocardiography. This figure is similar to that reported by Tolaymat (78 per cent) (10) but slightly less than the Utah study (91 per cent) (4). Two of 15 and 1/15 had erythema marginatum and subcutaneous nodules, respectively. None manifested chorea during this study period. Eleven of 15 (73 per cent) demonstrated two major manifestations. These were most frequently arthritis and carditis. Our incidence of arthritis and carditis together is greater than that described by the Utah study (42 per cent) (4). Only one patient manifested all four major criteria. In this patient, arthritis was less severe, but carditis involving both aortic and mitral valves was present. Several weeks after the onset of her illness the patient had florid erythema marginatum and widespread prominent subcutaneous nodules.

Five of 15 suffered significant heart damage from first attacks, one requiring surgery following the acute period. Two additional patients will probably require some type of restorative cardiac surgery in the future. Three of 15 patients (20 per cent) manifested significant heart failure during the acute period of illness.

Laboratory Findings

Only one of 13 patients receiving a throat culture in the hospital cultured Group A streptococcus. Two patients were not cultured. Of the 15 patients evaluated, 12 had a history of either a sore throat or a respiratory illness (80 per cent), but only nine of 15 (60 per cent) had a prior history of sore throat alone.

TABLE 3
Historical and Lab Findings in 15 Patients With Rheumatic Fever

History of prior sore throat	9/15 (60%)
History of sore throat or respiratory illness	12/15 (80%)
History of strep on throat culture	1/13 (8%)
Diagnostic ASO titers	15/15 (100%)
Positive CRP	4/15 (27%)
Elevated sedimentation rate	15/15 (100%)
Abnormal EKG	8/13 (62%)

All patients had diagnostic ASO titers and elevated sedimentation rates. CRP determinations were positive in four of 15 patients (27 per cent) but 11 did not have a CRP performed.

Abnormal EKGs, demonstrating either disturbance in PR interval or rhythm, were found in eight of 13 patients (62 per cent). Two patients did not have an EKG performed during their hospital stay.

Treatment

Most patients (12/15) responded to aspirin therapy alone. Three of 15 were treated with aspirin and prednisone, and these three also were the ones who had congestive heart failure. Our practice is in keeping with the general belief that prednisone is reserved for patients who have significant carditis with heart failure.

Discussion

Various factors have been cited as playing a role in the resurgence of acute rheumatic fever in different parts of the country. Those mentioned in one article were host resistance, virulence and changes in the medical community's approach to strep infection (5). Yet other articles have proposed that, since rheumatic fever is rampant in Third World countries such as India, Indonesia, the Middle East, and South America, there has been an importation of new strains by citizens of this country traveling in those locations (11). Tolaymat, in 1984, disputed the fact that there had actually been a decrease in rheumatic fever in a population of patients in northern Florida (10). He concluded that the incidence there was unchanged over the years, and that continued vigilance was indicated. Our study shows that the potential still exists in southern West Virginia for significant morbidity from rheumatic fever.

Sixty per cent of our patients had a prior history of sore throat, and 80 per cent had history of a sore

throat or a respiratory illness. The records were not clear on what percentage of patients sought medical care for the illness, but only one of 13 patients had streptocci found on throat culture, and two patients were not cultured at all. In the Pittsburgh study, only 24 per cent had had sore throat, but 24 per cent had some other illness of a non-respiratory nature without sore throat (5). In the Utah study, two thirds of their patients had no history of pharyngitis, but 78 per cent of the patients in the Ohio study recalled pharyngitis, an incidence similar to ours (4, 6). Except for one patient with a previous history of scarlet fever, the others who could recall respiratory illness or pharyngitis described their symptoms to the examining physician as trivial.

"Significant information as a consequence of this review was the fact that 4/15 patients (27 per cent) suffered significant valvular damage from a first attack of rheumatic fever."

Significant information as a consequence of this review was the fact that 4/15 patients (27 per cent) suffered significant valvular damage from a first attack of rheumatic fever. One patient had severe mitral regurgitation requiring valve replacement immediately, but still has aortic insufficiency. Two patients, who had aortic and mitral insufficiency, experienced regression of the mitral insufficiency, but significant aortic regurgitation persists, and will be a factor in their future health. One patient has persistent moderate aortic insufficiency without progression.

The information derived from this small sample could be summarized as follows:

1. Southern West Virginia has experienced a resurgence of acute rheumatic fever similar to outbreaks seen in more populous areas of Ohio, Pennsylvania and Utah.

2. Preceding pharyngitis and respiratory symptoms were mild, and thus would suggest increased vigilance on the part of parents and physicians.

3. First-attack rheumatic fever has associated with it a very high incidence of carditis. The morbidity and economic consequences of first-attack heart damage is significant.

Acknowledgements

We would like to acknowledge the secretarial help of Ms. Lisa Roat.

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At a Regional Center

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Results of cardiac transplantation have improved steadily following the first successful operation in 1967. However, rejection, infection, hypertension, hypercholesterolemia and accelerated coronary artery disease remain important late problems after successful heart transplantation.

Facilitated patient access to the transplant center based upon geographic proximity to the home, family, and primary care physicians leads to enhanced care by allowing the original transplant team to remain actively involved with ease in the long-term followup. With this goal in mind, a cardiac transplantation center was developed with emphasis on developing an organized approach to providing care for patients with refractory congestive heart failure in the Virginia, West Virginia, Washington, D.C., Maryland, and Delaware area.

Twenty-one of the 22 patients (95.4 per cent) survived and resumed active lives one to 26 months following heart transplantation. Forty-four rejection episodes occurred and were treated successfully, primarily on an outpatient basis. Only six infections were serious enough to require readmission to Fairfax Hospital, but all responded completely to treatment.

Cardiac transplantation at a center focusing on regional patient care is not only less costly and more comfortable for patients and their families, but the continuity of care and comprehensive management of late complications can lead to improved long-term survival rates.

The first successful heart transplantation by Dr. Christiaan Barnard in 1967 ushered in a new era of therapy for patients with end-stage heart failure (1). Initial results of cardiac transplantation in the late 1960s produced 20-per cent one-year survival rates in patients who were otherwise destined to die within days to months (2). During the next two decades, one-year survival rates progressively increased to 80 per cent due to major advances in the selection of patients as well as the diagnosis, treatment and prevention of rejection, and the management of infections in immunosuppressed patients (3).

Improved results led to the dissemination of heart transplantation programs to 130 hospitals throughout the United States in 1989 rather than in just the two centers which existed during the developmental stage. The aims of newer regional heart transplantation centers have been to: (1) lessen the emotional and financial strain of heart transplantation on patients and their families by providing easy access; (2) improve organ donation and distribution; and (3) make advancements in individual patient care and survival rates. With these goals in mind, the Virginia Heart Center at Fairfax Hospital began its cardiac transplantation program in December, 1986 (4).

Organization

The cardiac transplantation program at Fairfax Hospital was organized and refined over a two-and-one-half-year period beginning in June, 1984. Core physician members of the transplant team included a cardiac surgeon, an immunologist and a cardiac pathologist. All branches of the hospital staff developed protocols to delineate their role in the early inpatient and subsequent outpatient phases of care. Planning meetings at Fairfax Hospital involved physicians from cardiology and a wide variety of sub-specialties as well as representatives from a cross-section of departments including nursing, hospital administration, dietary services, pharmacy, physical therapy, social work, security, public relations, and housekeeping. Extensive on-site visits and subsequent follow-up telephone contacts with several heart transplantation programs across the country proved extremely useful. The operations of donor heart removal and heart transplantation were performed with informed family consent in human cadavers in the Fairfax Hospital morgue. Simultaneously, as members of the Washington Regional Transplant Consortium, intensive efforts were directed towards the public and medical/nursing communities to enhance awareness of the value and need of organ donation.

Evaluation

Patients referred to the Virginia Heart Center at Fairfax Hospital with refractory heart failure are evaluated over a two- to three-day period in a systematic fashion. Cardiac function is studied and optimized by heart transplant cardiologists as concomitant evaluations proceed by other members of the team. When needed, the cardiologist performs cardiac catheterization. If the pulmonary vascular resistance is elevated, its potential for reversibility is tested with oxygen administration and intravenous vasodilators, e.g., nitroprusside and prostaglandin E_1. Persistent and unresponsive elevation of the pulmonary vascular resistance is an important risk factor for donor right heart failure following heart transplantation (5). When myocarditis is a consideration as the cause of recent onset heart failure, a percutaneous endomyocardial biopsy is performed.

"...heart transplantation at a regional center is not only less costly and more comfortable for patients and their families but also can lead to improved patient care and enhanced survival rates."

After the evaluation is completed, each patient's history and findings are presented in detail to the Heart Transplantation Review Committee so that an individualized decision may be made concerning whether cardiac transplantation is appropriate. The Committee includes a cross-section of staff from internal medicine, surgery, psychiatry, nursing, social work, clergy, administration, and financial office.

Recipients

Since December, 1986, 99 patients have been referred to Fairfax Hospital as potential candidates for cardiac transplantation. Thirty-one patients were accepted, and 21 underwent transplantation. The mean age of the patients transplanted was 43 years (range 17-57 years). The median waiting time for a donor heart was 41 days (range one-213 days). Currently, five patients have been waiting one to eight months. Three of the 31 patients accepted for heart transplantation died before an appropriate heart was donated.

The 31 patients accepted for heart transplantation had evidence of severe left, right, or biventricular dysfunction. The etiology of the heart failure was ischemic heart disease in 14, idiopathic cardiomyopathy in 13, valvular heart disease in two, myocarditis in one, and congenital heart disease in one. The left ventricular ejection fraction ranged between five per cent and 20 per cent, with a mean of 12 per cent (normal > 50 per cent). Thirteen of the 22 patients transplanted required in-hospital care and monitoring while awaiting a donor, and 12 were dependent on one or more intravenous inotropic medications or the intra-aortic balloon pump. Twenty-one of the 22 transplanted hearts were donated within the local geographic region; one heart came from Ohio. The mean period of time the donor hearts were deprived of coronary blood flow (ischemic time) during transplantation was one hr., 46 min. (range 56 min.- two hr., 59 min.).

Surgery

The operative technique for heart transplanation used at Fairfax Hospital varies only minimally from that originally described 30 years ago in the experimental laboratory

and modified by Doctor Barnard in 1967 and 1968 (1, 6, 7, 8). The ischemic injury to excised donor hearts is limited by efficient use of donors in our region to minimize the time that the heart is not perfused with blood. A single injection of cold cardioplegic solution is administered in the ascending thoracic aorta prior to removal of the donor heart. The initial cooling is maintained by packing the heart in ice and transporting it expeditiously to Fairfax Hospital where the recipient awaits. Swan-Ganz catheters, left atrial pressure monitoring lines, and left atrial/ventricular vents are avoided in the recipients. Following completion of the left atrial suture line, the donor heart is kept cool by intermittent immersion in cold saline. No additional cardioplegic solution is administered. The risk of infection is limited by a concerted effort to remove the endotrachial tube, intravascular lines, the bladder catheter, and chest tubes within the first 24 hours after transplantation.

Immunosuppression

Following heart transplantation, patients undergo weekly endomyocardial biopsies during the early recovery period. With time, the frequency of the biopsies decreases progressively to once every three months after the first year. Each biopsy specimen is stained with hematoxylin and eosin and then graded on a scale from 0 (no rejection) to 10 (severe rejection) (9).

The immunosuppressive protocol includes cyclosporine, azathioprine (Imuran), and corticosteroids. Treatment of rejection varies depending upon the severity and timing. Options used to manage rejection in different situations include: (1) augmented oral prednisone; (2) intravenous methylprednisolone; (3) antithymocytic globulin; and (4) the monoclonal antibody OKT3. Emphasis is placed on individually tailoring the antirejection treatment to the specific situation to avoid excessive immunosuppression and the risk of serious infection.

Outpatient Care

After discharge from the hospital the patients are followed closely in the Fairfax Hospital heart transplantation outpatient clinic. Early focus is on adjustment of immunosuppressive medication doses, vigilant watch for subtle signs of infection and rejection, and enrollment in comprehensive rehabilitation programs of exercise and appropriate diet.

Management of hypertension is based upon decreasing the cyclosporine dose and specific treatment with diltiazem followed by captopril or enalapril. Hypercholesterolemia is managed by diet, decreasing the steroid dose with time and gemfibrozil when needed. Cardiac catheterization with coronary angiography is performed four months after heart transplantation, and then annually because of the late problem of accelerated atherosclerotic coronary occlusive disease occurring in transplanted hearts.

"Twenty-one of the 22 transplanted hearts were donated within the local geographic region."

Results

Twenty-two patients have undergone cardiac transplantation at Fairfax Hospital with 21 surviving from one to 26 months (mean 13 months). One patient with severe biventricular failure and pulmonary hypertension died in the operating room from right heart failure. The other 21 patients (95.4 per cent) are alive and, except for those in the early recovery phase, have resumed an active schedule, including full-time employment or school.

There have been 44 episodes of rejection, none of which were associated with evidence of hemodynamic dysfunction. Sixteen episodes of rejection (38 per cent) occurred in three patients. Twenty-five of the rejection episodes (57 per cent) occurred in the first three months after heart transplantation, and 29 (67 per cent) within the first four months. Five patients have not had any rejection, and five have had just one episode. Rejection with or without myocyte necrosis was treated and reversed successfully in every case.

Twenty-seven infections occurred in the two-year follow-up period, 18 of which became manifest in the first four postoperative months. Six patients have not had any infections. Only six of the infections were considered major. All infections resolved with appropriate therapy.

Discussion

Both quality of life and five-year survival are extremely poor in patients disabled by congestive heart failure, much worse in general than several types of malignant tumors. The one-year mortality ranges from 15 per cent to 90 per cent, depending upon the degree of cardiac dysfunction and the presence or absence of ventricular arrhythmias (10, 11). Almost 200,000 patients die every year from congestive heart failure in the United States (12). One half of patients with profound heart failure (NYHA functional class IV) die within one year, and two thirds are dead by two years (10). Contemporary pharmacologic management of heart failure with vasodilators such as hydralazine, isosorbide dinatrate and enalapril have improved these results notably, but still leave a dismal prognosis for a vast patient population (13, 14). Nearly all patients with incapacitating heart failure and an ejection fraction of 10 per cent or less die within three years (15, 16).

The clinical status alone is not sufficient as a lone prognostic indicator. Recent data warn that the absence of severe symptoms of congestive heart failure does not assure a favorable prognosis. Some subsets of patients with heart failure, i.e., those with low cardiac output and/or ventricular tachyarrhythmias, have a high one-year mortality rate despite only mild or moderate symptoms (17).

Cardiac transplantation dramatically improves the prognosis of patients with profound congestive heart failure. One-year survival rates increase from 10-65 per cent with pharamacologic therapy to 80-90 per cent after transplantation. Three-year survival increases from

10-20 percent to 70-80 per cent (2). Patients who were totally incapacitated prior to heart transplantation generally regain a feeling of well-being. They are able to return to work, attend school, and enjoy their families and avocations. One of the Fairfax Hospital patients who was bedridden and supported with intravenous dobutamine and amrinone successfully completed a 6.2-mile road race once he recovered from his heart transplantation.

Providing the transplant evaluation, the operation, and long-term follow-up care within the vicinity of the patient's home, as we have done at Fairfax Hospital, has several advantages. The use of local donors for local patients shortened the cold ischemic times of the donor hearts, thus limiting myocardial injury and reducing expenses associated with donor organ procurement. Family disruption for the heart transplant recipients is minimized by allowing the patient to remain home or to be relatively near home at Fairfax Hospital while awaiting a donor heart. Friends, family, and familiar physicians may visit and assist with care during the stressful waiting period and early postoperative phase.

Since the risk of rejection and infection is at its peak during the first four months after heart transplantation, it is best and generally required, that patients remain near the hospital during this phase. Having the heart transplantation center within the patient's home region allows the patient and the support team to remain together rather than dividing the family and adding further stress and expense to an already traumatic situation. It is easier, and therefore safer and less costly, to evaluate and treat a medical problem months or even years after transplantation when the patient lives in the region where the operation was performed.

The two principal problems looming over the field of heart transplantation are: (1) an immunologically-induced form of accelerated coronary artery arteriosclerosis producing myocardial infarction, heart failure and late death in transplant patients (18); and (2) the imbalance between the limited number of donor hearts available vs. the increasing number of patients in need of a new heart. Several thousand patients are reasonable candidates for heart transplantation in the United States, but only 1,500 hearts per year have been donated, and the number has not changed substantially in the last two years. In December, 1988, there were 1,032 patients accepted and waiting for a donor heart in the United States (19). A relevant number of transplant candidates on the waiting list will die before a donor heart becomes available. Ongoing educational efforts directed at the public and medical/nursing personnel as well as new "required request" legislation may help maximize donation of precious organs (20, 21).

"The use of local donors for local patients shortened the cold ischemic times of the donor hearts, thus limiting myocardial injury and reducing expenses . . ."

The results of the first two years of cardiac transplantation at Fairfax Hospital's Virginia Heart Center have fulfilled our original goals. Our results demonstrate that heart transplantation at a regional center is not only less costly and more comfortable for patients and their families but also can lead to improved patient care and enhanced survival rates.

Addendum

Since submission of the manuscript, two additional heart transplants have been performed. Twenty-four patients have undergone heart transplantation at Fairfax Hospital with 23 patients (96 per cent) surviving from one month to two years, seven months.

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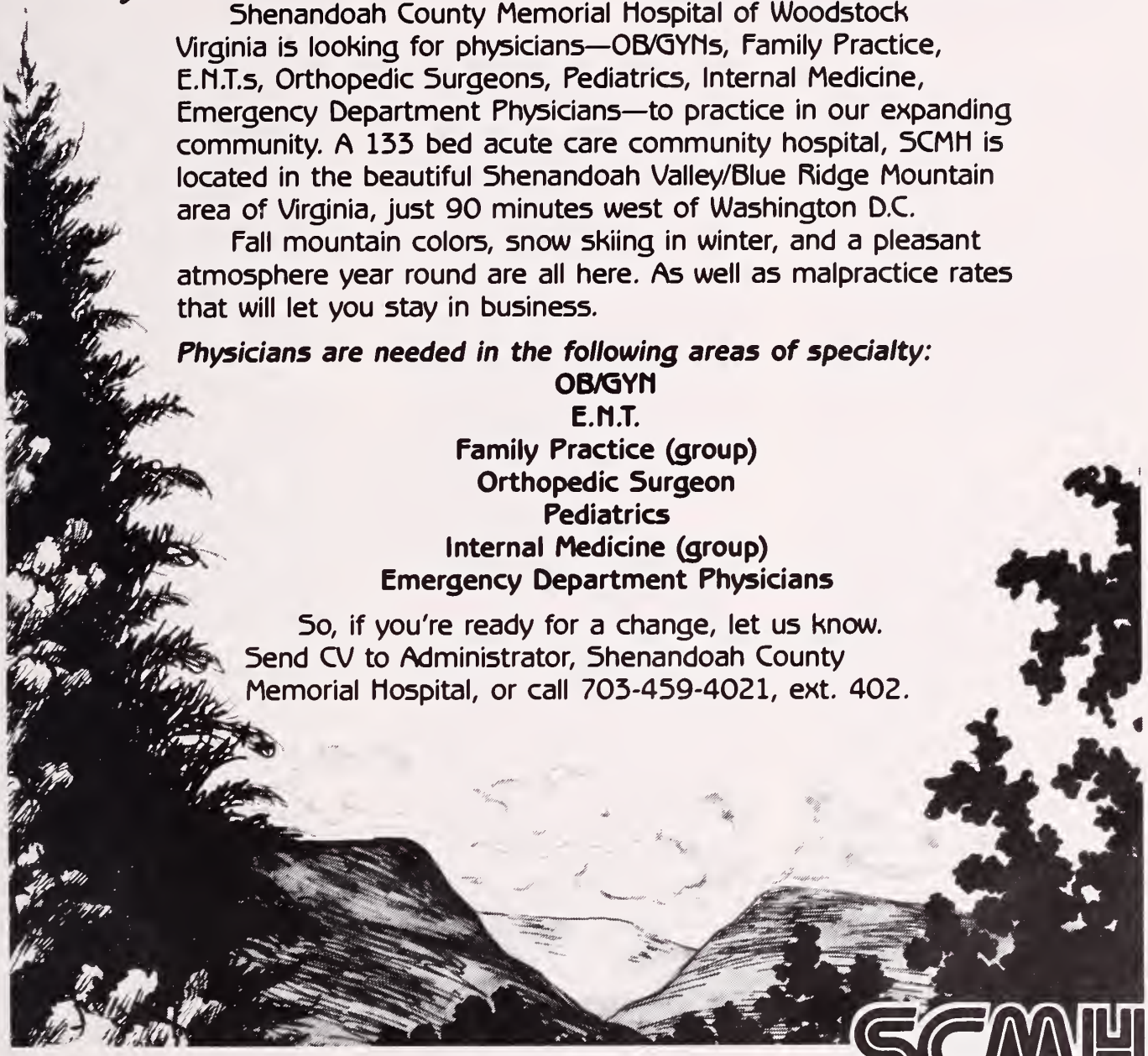

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Edited by Irma H. Ullrich, M.D., Professor of Medicine

Mitral Valve Prolapse Syndrome Revisited

Discussant:
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Mitral valve prolapse is a relatively common cardiac finding which, unfortunately, is often overdiagnosed and overtreated. For most patients, it can be regarded as an incidental observation without significance in terms of symptoms or prognosis. This article reviews our current understanding of what has been aptly called "the mitral prolapse fiasco".

History

Barlow and co-workers (1) are usually credited with first drawing attention to the association between systolic clicks, murmurs, and posterior movement of the mitral valve leaflets into the left atrium, which defines mitral valve prolapse. Anatomic studies identified related changes in all three components of the mitral apparatus. Grossly there was segmental and generalized redundancy and thickening of the mitral leaflets, dilation of the mitral anulus, and elongation of the chordae tendineae. Microscopic findings included an increase in the connective tissue stroma (myxomatous degeneration) and disruption of collagen. Calcification of these tissues occasionally was noted, but was a late finding.

Early clinical studies of mitral valve prolapse were based on highly selected groups of patients who often were initially referred because of various cardiovascular symptoms or signs. This selection bias naturally led to a high prevalence of such findings among study patients, and distorted for many years the actual picture of prolapse as encountered in the general population. During the 1970s, echocardiography became widely available, and with this the number of patients labeled as having mitral valve prolapse increased rapidly. This occurred in spite, or because of, the absence of firmly agreed-upon diagnostic criteria (2) and insufficient awareness of the many technical factors which can produce a false impression of mitral prolapse in normal individuals. Numerous reports dealing with prolapse continued to appear in the literature. Many of these were anecdotal, and seemed to establish a purported association between prolapse and virtually every other type of cardiovascular finding. Surveying the morass of data about mitral prolapse and the readiness with which it had been applied to large groups of normal or nearly normal patients, Leatham and Bridgen, in 1980, coined the phrase "mitral prolapse fiasco" (3).

> ***"Mitral valve prolapse is a relatively common cardiac finding which, unfortunately, is often overdiagnosed and overtreated."***

Finally, in the early 1980s, reports based on less selected patient groups began to appear which give a much more accurate view of the nature of mitral valve prolapse and its clinical significance. Data from these newer studies should be reassuring to patients and physicians alike, and will be presented in the following sections.

Diagnosis

The diagnosis of mitral valve prolapse may be suggested by the finding of a late or holosystolic apical murmur, a systolic click, or both, on physical examination. Maneuvers such as standing or Valsalva tend to move these sounds earlier in the cardiac cycle, and may augment their intensity. Squatting has the opposite effect. These changes are mediated through their effects on left ventricular volume, with a smaller ventricular volume reducing tension on the chordae tendineae, allowing earlier and more accentuated mitral leaflet prolapse. Data from the Framingham Study confirm that patients with prolapse tend to be tall and thin, and many have below-average blood pressure relative to body size (4).

Echocardiography remains the primary means of confirming the diagnosis of mitral prolapse. The characteristic finding is late systolic or holosystolic posterior movement of the mitral leaflets, often involving the posterior leaflet more than the anterior. The reference for measuring this movement on m-mode echocardiograms is the line between the closure and opening points (C and D points, respectively) of the anterior and posterior mitral leaflets. Two or three mm of posterior movement are required to support a diagnosis of prolapse using m-mode criteria. For two-dimensional studies, the reference is a line drawn between the insertion points of the leaflets to the mitral anulus.

False positive results are very common with both echocardiographic techniques. Caudal angulation of the m-mode beam, as caused by placing the transducer at too high an intercostal space, may give a mistaken impression of prolapse in over half of normal individuals (5). Two-dimensional images recorded from the cardiac apex often produce a false impression of prolapse due to the saddle-like shape of the mitral valve, which is convex in one plane and concave in

the perpendicular plane. Apical recordings should therefore not be used as sole evidence for mitral prolapse (6). Among the various echocardiographic views, the parasternal long axis image is the most reliable for detecting actual mitral prolapse. Barring unusual technical conditions, it should be possible to document prolapse by both m-mode and two-dimensional methods. Inability to provide such documentation should raise a suspicion of possible misdiagnosis.

Using echocardiography as the diagnostic standard, the Framingham Study (7) found that a systolic click was fairly specific for mitral prolapse (80 per cent with clicks had prolapse on echo) while murmurs were nonspecific. Both auscultatory findings were diagnostically insensitive, being present in fewer than 10 per cent of subjects with prolapse by echo. Only two per cent of the women and none of the men with prolapse by echo had both click and murmur on examination.

Angiography was used as the diagnostic standard in many early studies of prolapse. More recent data indicate that only severe degrees of apparent prolapse on angiography correlate with echocardiographic and auscultatory findings (8), and a diagnosis based solely on equivocal angiographic findings should be regarded with skepticism.

Symptoms

The belief that mitral valve prolapse produces a variety of symptoms is firmly rooted in the minds of many physicians, and this view is supported by statements in current editions of several leading textbooks of internal medicine (9, 10). Among the symptoms which have been attributed to prolapse are chest pain, dyspnea, fatigue, palpitations, anxiety, lightheadedness, and syncope (11). So strong is the impression of a causal link between mitral prolapse and symptoms that it is not uncommon to encounter patients with entirely normal physical examinations and echocardiograms in whom symptoms seem to be the only reason for their having been given a label of prolapse. Indeed, there appears to be a tendency to "hear" clicks and murmurs in these patients which cannot be confirmed on subsequent examinations.

Early clinical studies of mitral prolapse did suggest a high prevalence of various symptoms among patients with prolapse. These studies, however, failed to consider the selection bias inherent in examing groups of patients in whom symptoms were often the reason for initial referral.

Fortunately, this situation has been remedied by an examination of subjects and their relatives in the Framingham Study (7). These data lack the selection biases which confounded earlier investigations, and provide a much more valid assessment of the clinical features of mitral valve prolapse. In this study, chest pain was present in 12 per cent of subjects with prolapse by echocardiography, and in 16 per cent of normal controls, which was not a significant difference. The prevalence of dyspnea and syncope were likewise similar in the two groups. Subjects were not evaluated in regard to the prevalence of palpitations, but the prevalence of supraventricular and ventricular arrhythmias on 24-hour Holter monitoring did not differ significantly between those with prolapse and the normal controls (12). The prevalence of complex or frequent premature ventricular beats on treadmill exercise testing was also similar in the two groups (10 per cent and 13 per cent, respectively). In another recent study, Devereux and colleagues also showed no difference in the prevalence of chest pain, dyspnea, anxiety, or panic attacks between patients with prolapse and controls (13). In a separate study, the same group reported no difference in palpitations and recorded arrhythmias between subjects with prolapse and controls (14).

"Among the symptoms which have been attributed to prolapse are chest pain, dyspnea, fatigue, palpitations, anxiety, lightheadedness, and syncope."

Associated Findings

A number of electrocardiographic abnormalities have been ascribed to mitral valve prolapse, including ST and T wave abnormalities, particularly in the inferior leads, prolongation of the QT interval, and false positive ST changes on stress testing (11). Again, the more recent studies from Framingham (7) and elsewhere (13, 15) fail to support any of these associations. As with the symptoms described above, these apparent correlations derived from the same selection biases and lack of appropriate controls which confounded earlier studies.

Before the lack of relation between prolapse and symptoms was recognized, a number of investigators postulated the existence of abnormal autonomic function as a possible cause of prolapse symptoms. The study of Coghlan and coworkers is typical of these reports (16). They compared the response to Valsalva maneuver and postural changes between 44 symptomatic referred patients with mitral valve prolapse and 15 asymptomatic controls without prolapse, and observed differences in heart rates during standing and during the recovery phase of the Valsalva maneuver between the two groups. Without a control group having symptoms but no prolapse, or prolapse without symptoms, these data are difficult to interpret. Symptomatic patients with or without prolapse may have exaggerated or abnormal autonomic responses to various maneuvers, but available studies fail to establish a clear correlation, much less a causal link, between prolapse and autonomic dysfunction.

Course and Prognosis

The natural history of mitral valve prolapse is unknown because there are no good longitudinal studies of properly selected patient groups. Cross-sectional data from Framingham suggest that, at least in females, prolapse may disappear over time (17). The prevalence as defined by two mm of posterior

leaflet movement on echocardiography decreased from 17 per cent at age 20-29 years to two per cent over age 80 years among women. Among men the prevalence was 2.5 per cent, and was relatively independent of age.

Mitral valve prolapse has been linked to sudden cardiac death (18), and this understandably is the complication which tends to raise the greatest concern among patients and their physicians. For most, these concerns are unjustified. Approximately 100 cases of sudden death associated with mitral valve prolapse have been reported. If one assumes that all reported deaths were directly caused by prolapse (something which has not been established for any of these cases) and that there are an additional 100 deaths for every reported case, the long-term risk of death remains less than one in 1,000, assuming an overall prevalence of prolapse of five per cent in the United States population.

A small fraction of patients with mitral prolapse eventually develop significant mitral regurgitation. While the exact risk is unknown, Wilcken and Hickey (19) have derived an age-related estimate for men of approximately 0.5 per cent by age 50 and three per cent by age 70. The risk in women appears to be less than half that in men. Viewed from the surgical perspective, however, prolapse is now the most common underlying cause of isolated chronic mitral regurgitation among patients undergoing mitral valve replacement (20).

Those with mitral regurgitation are at increased risk of developing endocarditis. Again, the precise degree of risk is unknown, but appears to be on the order of a fourfold increase above that for the general population (21). The risk of endocarditis in patients without mitral regurgitation is very low.

Finally, some authors have reported an association between mitral valve prolapse and cerebral ischemic events (22). These reports are supported by several autopsy cases of stroke in which thrombotic material was found adherent to ulcerations on myxomatous mitral valves (23). The available data, however, are not unanimous in supporting an association between prolapse and cerebral ischemia. In a well-designed, case-controlled study using strict echocardiographic criteria, Egeblad and Sorensen were unable to demonstrate an increased prevalence of prolapse among patients younger than 40 years of age suffering cerebral ischemic episodes (24). The risk, if any, must be small, and firm demonstration of any association will have to await future studies.

Management

The first step in managing a patient with possible mitral valve prolapse is to confirm the diagnosis. Prolapse is commonly overdiagnosed, and many normal individuals have been needlessly burdened with the belief that they suffer from heart disease when none is present. In one referral-based series the initial diagnosis could not be confirmed in fully 40 per cent of prospective subjects (25). Based on the Framingham data, a definite apical systolic click is reasonably specific in establishing a diagnosis while murmurs are nonspecific. Both findings are insensitive, and the diagnosis usually rests upon a well-performed and interpreted echocardiogram. In evaluating the results of echocardiography one should keep in mind the technical factors described earlier which may lead to a high rate of false positive findings. As already emphasized, the symptoms once ascribed to mitral prolapse are entirely nonspecific, and have no role in supporting the diagnosis.

"While the exact risk is unknown, Wilcken and Hickey (19) have derived an age-related estimate for men of approximately 0.5 per cent by age 50 and three per cent by age 70."

If prolapse is confirmed, a search should be made for signs of an underlying connective tissue disorder such as Marfan or Ehler-Danlos syndromes. The former is characterized by tall, thin stature, arachnodactyly, chest wall deformities, hyperextensible joints, ectopia lentis, and aortic insufficiency. Patients with Ehlers-Danlos syndrome may have hyperelastic and fragile skin, easy bruising, hyperextensible joints, and ectopia lentis. Marfan syndrome and most forms of Ehlers-Danlos syndrome are inherited in an autosomal dominant fashion.

When a diagnosis of mitral prolapse is confirmed, the most important aspect of management for most patients is reassurance about the generally excellent prognosis. This may be difficult if patients previously have been misinformed about the nature of their condition, and may require patience and tact on the part of the physician. Given the lack of association between prolapse and symptoms, those who sought care because of symptoms should be evaluated for an underlying cause for their complaints. In these frequently young and healthy patients, often no explanation can be found, or at best, symptoms can be attributed to somatization of anxiety, which may itself call for treatment (26).

The small fraction of patients who have or develop significant mitral regurgitation need to be identified. Physical examination and echocardiography usually suffice for this purpose. Those with mitral regurgitation should observe endocarditis prophylaxis. Prophylaxis is not recommended for those who have clicks without murmurs (27).

Other therapy in these patients is generally unwarranted. Beta-blockers were once advocated for a variety of indications, but they probably have no benefit beyond a nonspecific antianxiety or placebo effect. There are no data to support a prognostic benefit for antiarrhythmic drugs in these patients, and given the cost, side effects, and potential for a proarrhythmic response, their widespread use is to be discouraged.

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AIR FORCE

No Place to Hide

PHILLIP H GOODWIN, F.A.C.H.E.
President and CEO, CAMCARE, Inc., Charleston Area Medical Center, Inc., Charleston, West Virginia

Editor's Note: Comments by Mr. Goodwin before the Kanawha Medical Society, May 9, 1989, Charleston.

Thank you for inviting me to speak about the environment in which we practice today. Quality is still the number-one issue when decisions are made on where health care is received, and quality is one great factor that we have the ability to control while our health care system is changing from mostly hospital based to a multi-faceted and somewhat fragmented system of provider entities.

Initially, the Omnibus Cost Containment Legislation considered in our state would have created an agency with the power to make payment decisions given to one individual—no rate review, no reasonableness test, no legislative oversight. The combined efforts of health care providers resulted in the passage of a bill that is less threatening. This bill is clear indication that state government intends to "change our system," and *has had* significant impact on the ability to recruit and retain physicians in the State of West Virginia.

The message that I wish to bring tonight is that "there is no place to hide" from change. Consider the following:

- Oregon established priority criteria for the Medicaid program. Highest priority included acute general health care services, prenatal care and family planning. Education programs on suicide prevention and sexual abuse rated five on a scale of one to 10, organ transplants (except kidney and cornea) a three, and cosmetic and plastic surgery, a one. In effect, the State of Oregon has decided to ration health care.
- The State of Massachusetts this past year passed a Universal Health Insurance Program which carries with it a mandatory assignment provision. Then presidential candidate Dukakis promised payment of past-due bills to providers and prompt payment. With the health providers support, this bill passed. Governor Dukakis now acknowledges the financial problems of his state, and has reneged on his pledge. Class action suits by the Massachusetts Hospital Association are under consideration.
- The State of Tennessee considered a gross receipts tax on all hospital revenues.
- Several states considered a hospital service tax.
- The Ohio State Legislature is considering a bill which would establish a "state medical care system". This system would adopt a model similar to the Canadian system, eliminate private insurance, and give the state control of allocation of resources.
- We are familiar with Doctor Hsiao's proposal for relative value scale. Doctor Hsiao's proposal would have redistributed the income among physicians. The principal objection at the federal level to Doctor Hsiao's relative value scale system is that it does not reduce the level of payments overall.
- The president's budget-reduction program contained a $5 billion reduction. A compromise has been reached which will reduce Medicare reimbursement by approximately 2.3 to 2.7 billion dollars. Estimates are that approximately two thirds of this reduction will come from fees paid to physicians.
- For the last two years, the Illinois Medicaid program has run out of money with little hope of making up back payments.

". . .our health care system is changing from mostly hospital based to a multi-faceted and somewhat fragmented system of provider entities."

- If I need to say more to you than the name Representative Pete Stark (D-CAL), then you need to go do your homework. Representative Stark's vigorous and energetic activities attacking any physician business relationship other than his own private practice are receiving significant nationwide attention.

The purpose of this litany is to put our West Virginia experience into perspective.

Change Will Not Abate

We must realize that our system is undergoing major change which will not abate in the near term.

As providers, we do not control the system as we used to. Decisions today are made by those who are paying for services and perhaps, in many respects, rightly so. The issue of health care costs is not simply a casual topic of cocktail conversation. Health care costs are a major item today for:

- Federal legislators and regulators
- State legislators and regulators
- Social planners, economists, third-party insurers, employers, and private individuals

Our responses to these concerns must change. The ones we have used in the past are simply no longer acceptable. While quality is still the number-one issue, accessibility, efficiency, and overall costs are rapidly rising to an equivalent level. Today, the definitions of quality are both clinical and patient-service oriented. Information to payors and regulators is much more readily accessible and accurate, and those who are now looking over our shoulder are much more able to determine inappropriate quality.

We must recognize that our responses must change also because the environment in which we operate is significantly different. I can assure you that others are busy today designing and developing new approaches to delivery of health care and using as guidelines, access, cost effectiveness and clinical quality.

As we think about the impact of this change on each of us, we must realize that our ("doctors and hospitals") perspectives are different.

The physician's perspective is an individual perspective while the hospital's perspective is corporate.

The physician's perspective is a personal one related to your individual practice while the hospital's perspective is community based.

The physician's perspective is short term (that is, concerned with the time that you plan to be in practice). The hospital's perspective is long term. We must consider what our role, position and service capabilities will be 20 years, 30 years in the future. We have a responsibility for effective operation today but maintaining our institutions as community resources for the long term.

This is not to say these perspectives are good or bad. That's just the way it is.

Our challenge institutionally is to support physicians who practice in our institution, but plan and adapt for the long term.

Your challenge is to have a productive and satisfying practice experience, yet support the hospital's mission and long-term survival.

Hospitals' Mission

The hospitals' mission is no longer to simply be "a hospital". In today's environment, our mission must be as a health services company. We find ourselves with a system that is extremely decentralized, responding to the changing social needs of patients who are seeking services based upon access, convenience, quality and price.

As community-based institutions, we feel it is legitimate to provide those health services which are needed and demanded by our communities regardless of the fact that they may not be within the acute setting of the institution. As more and more entrepreneurs enter the marketplace, as more and more for-profit entities surface, we feel that who better to provide these services than those of us whose total commitment is to the long-term provision of quality and accessible health services. We do not have a short-term, profit-oriented role and, therefore, you can expect to see community hospitals involved in the multi-dimensional delivery of health services for the long-term future.

Given this scenario, if we, physicians and hospitals, are to maintain maximum control over our practice and our future role, we must find ways to work together.

The circumstances we find ourselves in will create some conflict and competition among us. We must find ways to work through this conflict and competition, and maximize support in a cooperative role.

As the financial squeeze continues, it is not realistic for physicians to expect the hospitals to make up the difference. The evolving payment system simply will not allow it. The current system of reimbursement simply is going to refuse to support that kind of response.

We must develop rational resource allocation plans. We must develop mutual support roles, and we must develop new and effective, cost-efficient delivery models.

Others are busily designing these systems. If we do not take the initiative within our local communities to do this together, then someone will. Those who have as their principal goal the restructuring of our health care system (particularly at the federal level) do not care who among us is in business next year. Their attitude is much more global, and they understand that health care will be delivered in

some form and by some provider. They see their role as restructuring the system around an economic base geared towards federal and state budget capacities. They know that when this new system evolves, someone will be delivering health services. Therefore, in the long run, they have little concern over who those providers will be.

Doom and Gloom?

Is it all "doom and gloom"? Could be. That depends on how you look at it. One certainly could take a defeatist view, and it is obvious today that many are, particularly the people who are looking in terms of the short time frame. They simply do not want to go through the trauma and change necessary to adapt to the new environment.

On the other hand, one can look at this circumstance as a challenge and an opportunity to be involved in reshaping the system. A challenge, to be sure, but a very exciting time. A time when we are undergoing the single greatest fundamental social change in the health delivery system structure since mid century after World War II when the health care delivery system was institutionalized in the hospital setting. Opportunities are "unlimited".

Our technology continues to increase, and the scope of our services continues to expand. As we look within the political arena, we must remember that we hold one of the most significant positions. That is the control over quality of care rendered and the relationship with our individual patients and communities. If we form intelligent responses to the legitimate questions of cost, access, convenience, and quality, we can have a major impact on the reshaping of the system with the full support of our communities and our patients.

If we simply fall back on the old reactive responses, then we will be subject to the change forced upon us by the regulators and economic and social planners.

The Way It Is

I'm not trying to distinguish between what is good and what is bad within this environment. I'm here simply to tell you that this is the way it is. The question is, how are we to respond? My challenge to you tonight is to think seriously about this changing environment and to recognize that our recent experiences in West Virginia are not an isolated incident but a symbol of the changes going on throughout the American health care system. I invite you to join with your community hospital to work through our inherent conflicts, whether they be philosophical or economic, and become the moving force in the reshaping of the systems that serve our communities. When we are all long gone, our institutions and a health service system will be here. It is my hope that we can work together to keep it the best that we as health professionals can offer to our communities.

Thank you for the opportunity to be with you this evening.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table I), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal*, which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*. Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus*.

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

1. Ann Intern Med 1982;96:766-71.

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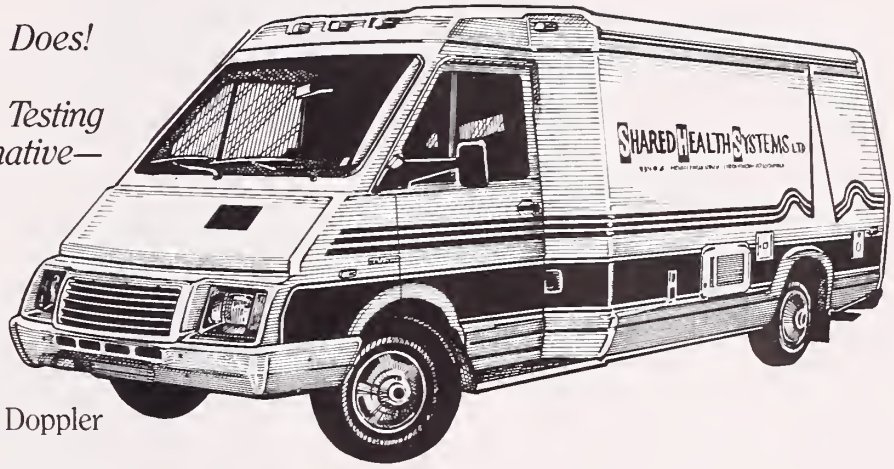

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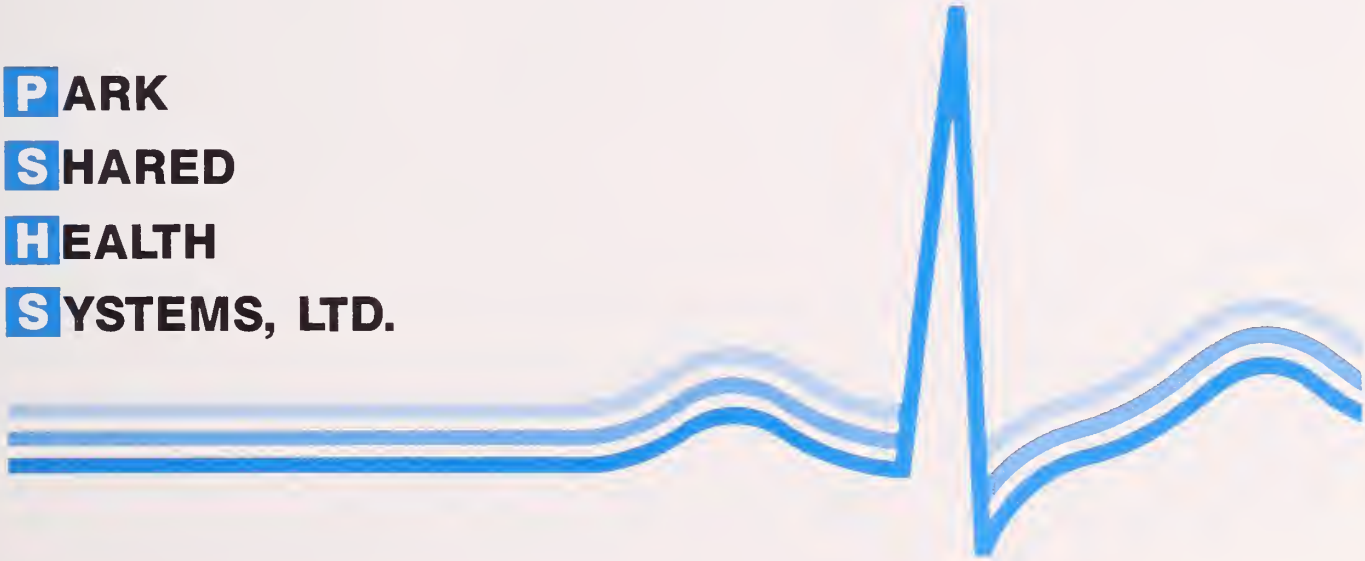

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Speak With Authority

This will be my last opportunity to communicate to you via the "President's Page". On August 19 I will relinquish the presidency to the very capable hands of our now President Elect, Derrick L. (Rick) Latos, M.D., F.A.C.P. I appreciate the honor that was placed upon me to serve as your President during the past year. It was very enjoyable to travel around the state and visit the different component societies, to talk with the different physicians, to visit various hospitals and see many areas of the state that were new to me. I have been able to confirm that we have an excellent medical system in our "Little Mountain State". Medicine in West Virginia is second to none. For the most part, this has been a good year except for a couple of situations that took place.

Things were very smooth until March 21 when the Omnibus Health Care Cost Containment Act (SB-576) was introduced. An attempt to defeat the bill or nullify it with amendments was unsuccessful, and finally a compromise was negotiated. After the passage of SB-576, things have never been the same. We have had two special meetings of the House of Delegates (May 21 and July 9), the second of which was very chaotic. Four motions were presented, three of which passed, with the fourth withdrawn. One of the motions approved called for the Council to dismiss the Executive Director.

Those thing are now behind us, and we must bind up our wounds, join together and march forward as a strong organization that speaks with authority for all of our physicians. We must not let the actions of the House of Delegates at our meeting July 9 weaken us as an effective organization to deal with the state administration and the Legislature in the future. The American Medical Association is very active at the national level, but we are, after all, the only organization with the strength to cope with the problems that face our profession in West Virginia.

As we start a new presidential year, I ask that each of you get behind our new President and Executive Committee with your support to give strength to the West Virginia State Medical Association.

I wish the new President the best of luck, and pledge my support to him and the Association.

—Bill M. Atkinson, M.D.

Pressure

Cool, calm and collected. Amenable to suggestions and other views but quietly resolute about carrying out the stated goals of the Association.

These thoughts might flash through your mind as you think about WVSMA President Bill M. Atkinson, M.D., and his near-completed term of office. They are the impressions of one who has worked closely with Doctor Atkinson during the past year but perhaps not the more vivid description that probably would come from those such as his fellow officers who have labored more intimately with him during the difficult year of his presidency.

What serious problems he has faced! Both internal and external. Lesser men could have been pardoned for thinking of "bailing out" or quietly developing an ulcer, yet President Atkinson, with his calm demeanor, has always seemed to exude confidence and determination "to see things through" for the good of the Association.

Bill M. Atkinson, M.D.

As he puts it in his final President's Page in this issue of the *Journal*, things went smoothly after he was installed until passage of the compromise SB-576 in March, after which "...things have never been the same."

Yet, despite all of the problems immediately facing the state Association and its officers, he has managed to look outward and onward. If you had to come up with two words to sum up his President's message during his year in office they might be "outside pressure." Outside pressure on physicians by new state and federal regulations—by the high cost of starting a medical practice, by continuing cost-containment proposals by the federal government, by new rules on the dispensing of legend drugs and the disposal of infectious wastes, by the controversial prospect of having "RCTs" to help the nursing shortage, and by threatened restrictions for physicians in referral of patients to diagnostic or therapeutic facilities in which they have a vested interest.

Doctor Atkinson has interpreted adroitly the national pressures facing Medicine and how they tie into our state situation.

All of this was accomplished while facing, and dealing with, major roadblocks to the WVSMA state legislative program and the manifold internal problems, routine and otherwise, at WVSMA headquarters.

This kind of performance under pressure earns our respect and appreciation.—CBH

Babble

We in Medicine find ourselves in a humanistic dilemma. Our humanism has led us into a trap wherein we are faced with the alarming options of renouncing our humanistic credos or of stubbornly retaining our beliefs and abandoning our patients to the tender mercy and ministrations of cost-conscious businessmen and governmental bureaucracies.

We speak the language of humanism and accept as a given that Americans have a right to medical care. Businessmen and bureaucrats speak the language of business. In that language the bottom line is all that counts and, in that language, Medicine is no more than a figure on an accounting form...a figure on the cost side of the ledger, to be sure.

We speak humanism and they speak business. Together, we are figures constructing a tower of Babel. We do not understand one another. We are a duet attempting to harmonize singing off two different pages of music.

As humanists we become responsible for *giving* care once we accept the dictum that everyone has a *right* to medical care. This is fine and, as a matter of fact, very convenient for business and government, for they feel no corresponding responsibility to pay for that care. The growing problem of the medically uninsured and underinsured is a clear reflection of the willingness of business and government to allow us our humanistic responsibility to give that care. There is some very definite endpoint in this arrangement, however, beyond which our capabilities or even our willingness will not carry us. That is the point at which we will drop our humanistic credo.

That is the point at which a reassessment of our humanistic obligations will determine that our larger responsibility lies in preserving the system in order that we might carry out our responsibility to the population as a whole rather than to individuals within that

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population. Such a change of heart will require us to begin speaking the language of business.

We are presently in an untenable position. We would like to be a part of the supply/demand system but cannot be and, apparently, will not be until or unless we renounce our humanistic stance. A sad choice.

Our very pragmatic problem is how do we renounce humanism? How do we reduce ourselves and what we do into a set of figures on the ledger sheet? That problem in mathematics is painfully degrading even to contemplate.

Failing that renunciation, however, we are left with the relatively weak compromise position of creating political alliances and coalitions of interest groups through organizations such as AMPAC. Such tactics have in the past slowed our retreat but the movement has, to be sure, been a steady retreat. There have been few victories for us, only disasters avoided.

A sense of humanistic compassion broader than the one we have traditionally espoused mandates that we look to the future of medical care. In order to fulfill our responsibility to preserve, to protect and to pass on to the future the intact, vibrant, confident and progressive Medicine we inherited, we must become sellers of a service. There is no humanistic merit in allowing medical care to deteriorate or for it to be set on a course to mediocrity. We have allowed ourselves to be intimidated into moving in that shameful direction, however.

We can talk good sense. We can point out the nonsense and the illogic of our adversaries but until we start talking their language, we will not be heard. We will have been talking to ourselves.

The need to make a painful choice of paths to a humanistic goal is upon us.—SDW

Our Readers Speak

Fewer Delivering Doctors

The West Virginia Hospital Research and Education Foundation in collaboration with the Department of Community Medicine, WVU Medical Center, has recently completed a study of physicians who have stopped delivering babies in the past two years. The number of family physicians delivering babies declined from 130 physicians two years ago to only 48 this year, a decline of 62 per cent. The number of obstetricians/gynecologists delivering babies declined from 180 two years ago to 125 this year or a decline of 30.5 per cent.

By far, the most important reason given for dropping obstetrical services was the increase cost of malpractice insurance. Other important reasons given included the closure of obstetrical units by the hospital, and inadequate Medicaid reimbursement by the state of West Virginia. Adequate reimbursement from the Medicaid program is especially critical since it covers 58 per cent of all births in West Virginia.

A second phase of study will include a closer look at counties where there are no physicians delivering babies. According to the study, four hospitals have recently closed their obstetrical units including Boone Memorial, Braxton Memorial, Montgomery General and Webster County Memorial. In addition, a number of hospitals have been without obstetrics for some time including Grafton City, Hampshire Memorial, Plateau Medical Center, Potomac Valley and Morgan County War Memorial.

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Master Clinician

While reflecting during my annual retreat to Johns Hopkins to further my medical education, I could not help but think of the many great physicians this institution [The Wheeling Clinic] has produced. In Wheeling, we have lost a great physician, Robert U. Drinkard, who practiced internal medicine for almost a half century ever in the pursuit of excellence. This is an enormous challenge for such a broad specialty.

I am sure he came into contact with almost every known or unknown disease entity. He took the needed time with every patient, showing compassion and personal interest. He was a teacher for many physicians in training or otherwise, and surely was a mentor to many. His knowledge and wisdom benefitted all of us.

I personally feel fortunate to have known him. All of us should take a moment to be thankful. Robert U. Drinkard's service to mankind will always be remembered.

Byron L. Van Pelt, M.D.
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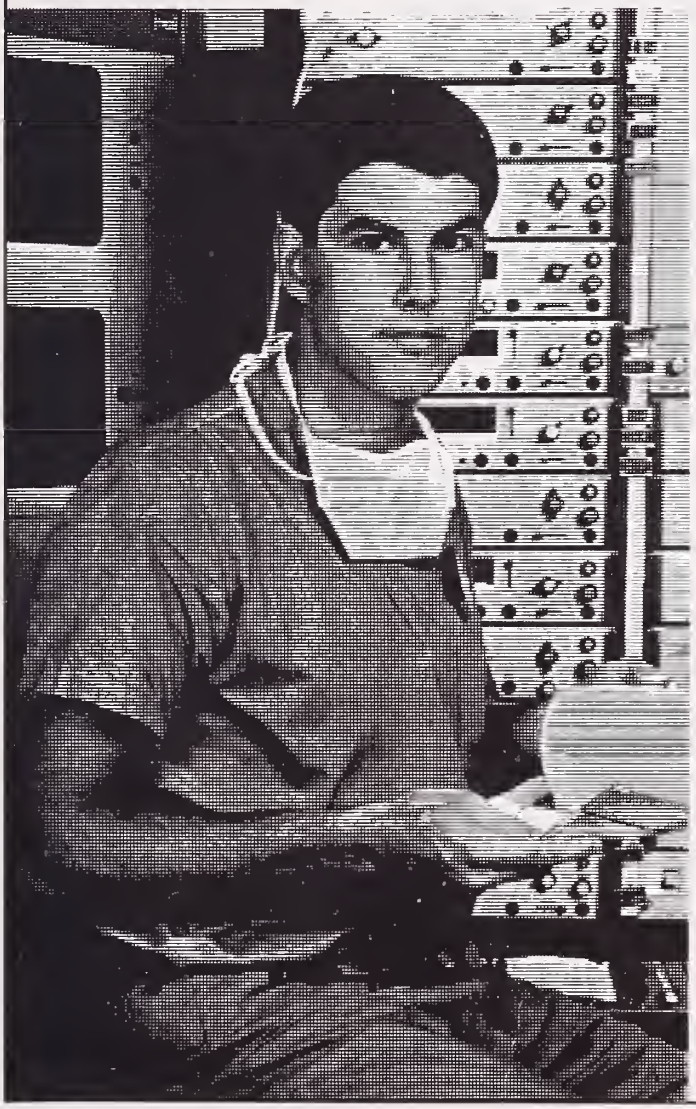

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New Challenges, New Opportunities

A past President of the American Medical Association who also is a current member of the Advisory Committee for Health Care Technology Assessment will deliver the opening Thomas L. Harris Address for the 122nd WVSMA Annual Meeting.

Edward R. Annis, M.D., of Miami Shores, Florida, will speak on "New Challenges, New Opportunities" at 10 A.M. Thursday, August 17.

Some 475 physicians, Auxilians, exhibitors and others are expected to attend the convention, August 15-20, at the Greenbrier.

Derrick L. Latos, M.D., Wheeling nephrologist, will be installed as WVSMA President to succeed Bill M. Atkinson, M.D., Parkersburg surgeon, during the second session of the House of Delegates Saturday afternoon, August 19.

World, National Posts

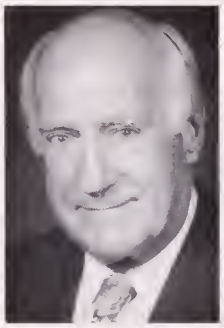
Doctor Annis also is a past President of the World Medical Association and the United States Section of the International College of Surgeons.

He is Chairman of the Florida Medical Association Speakers Bureau and a member of the Speaker's Advisory Committee of the Future, appointed by Jon Mills, Speaker, Florida House of Representatives.

Doctor Annis is a past Director of the Chamber of Commerce of the United States, Washington, D.C., a member of the Board of Directors of American Institute of Medical Law, Inc., and Consultant to North American Physicians Insurance Risk Retention Group.

He also is Consultant and member of the Board of the American College of Eye Surgeons.

Latos



Annis

The first general session will begin immediately following Doctor Annis'es address, with other general sessions scheduled Friday and Saturday mornings. As announced previously, discussion subjects will include the doctor and the politician; Lyme disease; external influences on the practice of medicine; allergy-free, non-toxic environment; Campylobacter pylori in gastritis and peptic ulcer disease; disease prevention, and MRI of the brain and spine. (See Convention Program in this issue of the *Journal.)*

Other meetings of general interest will include a risk management seminar Thursday afternoon and an open meeting of WESPAC Friday afternoon.

Convention activities will begin with a meeting of the Executive Committee Tuesday evening, August 15. Council will meet Wednesday morning, and the first House session will be held that afternoon.

Doctor Atkinson will deliver his Presidential Address at the first House session.

Thursday afternoon will be set aside for golf, tennis and volley ball tournaments, and meetings of WVSMA sections and specialty societies will be held primarily Friday afternoon.

A luncheon is scheduled Saturday for past presidents of WVSMA, visiting neighboring presidents, and West Virginia 50-year-graduate physicians.

AMA Trustee to Speak

As announced earlier, Rufus K. Broadaway, M.D., of Miami, Florida, a member of the AMA Board of Trustees, will address the first House session Wednesday afternoon. His topic will be "Quality Initiatives on Two Fronts."

There will be a reception for exhibitors Thursday evening, sponsored by CNA Inusrance Company and McDonough Caperton Insurance Group; and on Friday evening there will be cocktail parties for WVU, Medical College of Virginia, and University of Virginia alumni.

Entertainment by "Mainstreet," seven singers/dancers and three instrumentalists, is scheduled Friday evening (see accompanying story).

The 122nd Convention will end Saturday evening with a reception for outgoing and incoming Association and Auxiliary officers.

Nominations Committee

The WVSMA Committee on Nominations will meet at 5 P.M. Friday, August 18, in the Tyler Room at the Greenbrier in White Sulphur Springs.

Members of the 1989 Committee are Drs. David Z. Morgan, Morgantown, Chairman; Jasbir S. Makar, Weirton; James D. Helsley, Berkeley Springs; Karl J. Myers, Jr., Philippi; Michael A. Morehead, Parkersburg; Robert W. Lowe, Huntington; William C. Covey, Jr., Beckley, and David F. Bell, Jr., Bluefield.

Conventioneers are urged to visit some 64 commercial and scientific exhibits in the Exhibit Center, which also will be the location of the convention registration desk. Registration will begin Wednesday at noon.

As noted, please see the official Program and related articles in this issue of the Journal for specific convention activities and speakers.

The annual meeting of the Auxiliary, with Mrs. Harvey D. Reisenweber (Ginny) of Martinsburg, the current President in charge, as usual will hold its meeting in conjunction with the Assocation's. The official Auxiliary program also appears in this issue of the *Journal*.

Anxiety Workshop Part of Program

Four physicians from Hershey (Pennsylvania) Medical Center will conduct an Anxiety Disorder Workshop as the wrap-up of the 15th annual Hal Wanger Family Practice Conference in Morgantown, October 19-21.

Participating in the Saturday, October 21, Workshop will be Drs. Laurence Bauer, Assistant Professor, Family and Community Medicine; Thomas Lehman, Professor and Chairman Emeritus, Family and Community Medicine; Jacqueline McArdle, Adjunct Associate Professor, Psychiatry and Behavioral Medicine, and Thomas J. McGlynn, Associate Professor, Internal Medicine.

West Virginia University School of Medicine faculty will conduct the remainder of the conference, which will be held at the WVU Health Sciences Addition Auditorium.

Discussion topics will include "But the Test Doesn't Support the Diagnosis," "It's O.K.! It's a Prescription," "Delayed Menses; Pregnant?," "Mohs Surgery—Progress in Skin Cancer," "Why Listen for Femoral Bruits!," "Early Intervention for Special Kids," "Senior Citizens are Different,"

"Hematuria! Is It Cancer?," "Problems With the Recreational Athlete," "Progress in Diagnostic Radiology," "Management of Pelvic Masses," "Angina!—What Procedure is Next?," "Changes in Immunization Schedule," "Surgical Management of Pain," "Laser Surgery of the Head and Neck," "Pulmonary Emboli!, What Now?," and "Hand Trauma, An Emergency Nightmare."

Sponsors are the West Virginia Chapter, American Academy of Family Physicians; WVU Department of Family Practice, and Office of Continuing Medical Education, WVU School of Medicine.

MAINSTREET: Convention Entertainers

"MAINSTREET," featuring the talent of young performers, will provide entertainment for the WVSMA convention Friday evening at 9:45 in the Chesapeake Room at the Greenbrier.

The troupe is comprised of seven singer/dancers along with three instrumentalists. The fully choreographed and staged presentation incorporates the "contemporary sound" with the variety of the past.

Full group selections are alternated with small group and solo spots.

"MAINSTREET"'s self-contained instrumental back-up includes piano, bass and drums. In addition, a wide variety of instrumentation using trumpets, trombones, harp, synthesizers, etc. is provided on a state-of-the-art sound system.

Using costume design from New York to Hollywood, there are several costume changes during the course of a typical show.

The entertainment will be hosted in part by RMI, ltd., of Charleston, with after-dinner drinks provided courtesy of PIE Mutual Insurance Company of Cleveland, Ohio.

Auxiliary Program Announced

Mrs. Ginny Reisenweber

Mrs. Jean Hill

Mrs. Barbara Thibodeaux

Mrs. Jean Hill (J. Edward) of Hollandale, Mississippi, and Mrs. Barbara Thibodeaux (David C.) of Marietta, Georgia, will be among honored guests when the West Virginia State Medical Association Auxiliary holds it 65th Annual Meeting August 16-19.

The meeting again will be held concurrently with the WVSMA Annual Meeting in White Sulphur Springs at the Greenbrier.

Mrs. Hill was installed in June as the new President of the American Medical Association Auxiliary. She will deliver the keynote address during the opening Auxiliary session beginning at 9:30 A.M. Thursday, August 17.

Mrs. Thibodeau, President of the Southern Medical Association Auxiliary, will speak during the Friday morning session.

County, State President

Active in the medical auxiliary for many years, Mrs. Hill previously served at the national level as President-Elect, Secretary, Regional Vice President, Director, Chairman of the Health Projects Committee, and member of the Resident Physician/Medical Student Spouse, Membership, Legislation, and AMA-ERF committees.

For her state and county auxiliaries, Mrs. Hill has served as President and in a variety of other positions.

In additon to her medical auxiliary activities, Mrs. Hill has been involved with a number of volunteer organizations including the Mississippi Heart Association, the Mississippi Children's Home Society and Family Service Association, and the Washington County Board of the Republican Party.

She is a member of the Board of Directors of the Mississippi Federation of Republican Women, and was honored as one of Mississippi's outstanding Republican women in 1986.

A graduate of the University of Mississippi Medical Center, Mrs. Hill is a registered radiological technologist.

She and her husband, a family practitioner, have two daughers.

Auxiliary Career

Mrs. Thibodeaux has held 10 offices in the SMA Auxiliary since being named Chairman of the Program and Annual Meeting for 1977-78.

She also has been President of her county and state auxiliaries.

The SMA Auxiliary President holds a B.S. degree in home economics and credentials in elementary education. She has taught in Louisiana and Georgia public schools.

Mrs. Thibodeaux's other activities include those as Board Member of the College of Agriculture of Lousiana State University, and Board Member of the International Bossons Collectors Society.

She and Doctor Thibodeaux, a radiologist and nuclear medicine physician, are the parents of four children.

More than 200 spouses of physicians are expected to attend the Auxiliary's business sessions in the Hayes Room, over which Mrs. Ginny Reisenweber (Harvey) of Martinsburg, President, will preside.

WVSMA President Bill M. Atkinson, M.D., and the WVSMA Executive Director will be recognized for brief remarks prior to Mrs. Hill's address Thursday morning.

An invitation has been extended to Auxiliary members to attend the formal opening ceremonies of the Association's 122nd Annual Meeting beginning at 9:45 A.M. Thursday in Governor's Hall. Edward R. Annis, M.D., of Miami Shores, Florida, will deliver the keynote Thomas L. Harris Address. Doctor Annis, a Past President of the American Medical Association, will talk on "New Challenges, New Opportunities."

Auxilians also are invited to attend the first session of the WVSMA House of Delegates beginning at 2:45 P.M. Wednesday in Governor's Hall. Rufus K. Broadaway, M.D., of Miami Florida, member of the AMA Board of Trustees, will speak on "Quality Initiatives on Two Fronts."

During the second Auxiliary session Friday morning, Mrs. Hill will install Mrs. Lois Spencer (Edward) of Bluefield as President, and other new officers. Mrs. Spencer will give her inaugural address.

Entertainment by "Mainstreet," singers, dancers and instrumentalists, will be provided for WVSMA and Auxiliary conventioneers Friday evening at 9:45 in the Chesapeake Room.

For other scheduled activities, see the offical Auxiliary program in this issue of the Journal.

Convention Timetable

The Thursday, August 17, general scientific session will follow 9:45 A.M. opening exercises.

The first session of the House of Delegates will be Wednesday, August 16, beginning at 2:45 P.M. The second session will be Saturday beginning at 2:30 P.M.

Poetry Corner

Bereft

Leaving to the past that painful day,
Time is creeping
Slowly,
Stealthily,
Inexorably away,
As a jungle lion stalking the killer of his mate
Makes ever larger circles
'Til at last he loses sight and smell
Of the dead lioness and her cubs.

Through the darkness of these days and years,
As in the lion's jungle dark,
Suddenly appears
A clearing, painfully bright,
Bringing back that day
When time slowed in its flight.
Oh, that it would have stopped,
Reversed,
And we could have known again
The happiness rehearsed
In those few months.

The lion and I stop
To raise our heads on high
And roar and cry
For our loss,
Then silently slip into the jungle shade
To forget—to forget.

Robert L. Smith, M.D.
Morgantown

Sob Story

Sometimes it's hard to be a man
Crying is not easy you know
Got problems? Swallow them if you can
Be brave is the sure way to go.
Love a child? It's O.K. to love your own
Love someone else's? You know you would look crazy
It's o.k. to grunt a little when you hurt (real bad)
It's o.k. to sigh (a little) when you are very very sad
But Cry? Forget it.

Tears in your eyes or on your cheeks (dry them before someone sees)
A quaver in your voice? (talk real low or sneeze)
Hug a man? (don't even think of it)
Sometimes it's very hard to be a man.

I find it very hard to understand why just because I am a male
I can't cry or wag my tail
Great umpty cave man grandfather you left us a mess
Cause it is awfully hard to be a MAN.

J. Paul Aliff, M.D.
Scott Depot (Putnam County)

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

Golf, Volley Ball, Tennis Planned

State doctors, Auxilians and exhibitors plan to work sports competition into the business and scientific program schedule for WVSMA's Annual Meeting at the Greenbrier August 15-20.

WVSMA has set aside Thursday afternoon, August 17, for golf, tennis and volleyball tournaments.

M. D. Avington, M.D., of Parkersburg is Chairman of the tennis tournament, which will consist of men's doubles round robin play.

William E. Gilmore, M.D., of Parkersburg is golf tournament Chairman.

James L. Comerci, M.D., of Wheeling is Chairman of the volley ball tournament. Players can sign up at the convention registration desk.

Tennis and golf tournament prizes will be awarded during the reception Saturday evening. Tennis prizes will be courtesy of A. H. Robins Company; golf prizes, by Marion Laboratories, Inc.

Medical Meetings

August

15-20—122nd Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

2-3—Philippine Medical Assoc. of WV, Charleston.

11-14—Am. College of Emergency Physicians, Washington, D.C.

18-21—Am. Academy of Family Physicians, Los Angeles.

21-23—Am. Academy of Facial Plastic & Reconstructive Surgery, New Orleans.

21-23—Assoc. of Am. Physicians & Surgeons, Orlando, Fla.

21-23—Am. College of Nuclear Medicine, Chicago.

24-27—Am. Neurological Assoc., New Orleans.

October

4-5—National Political Education Conference, Washington, D.C.

5-6—Am. Academy of Pediatrics, Atlanta.

15-20—Am. College of Surgeons, Atlanta.

18-21—Am. Academy of Clinical Psychiatrists, St. Louis.

19-21—Hal Wanger Family Practice Conference, Morgantown.

19-22—Am. Society of Internal Medicine, Washington, D.C.

30-Nov. 3—Am. College of Chest Physicians, Boston.

November

4—AMPAC Candidates Workshop, St. Louis.

5-8—Southern Medical Assoc., Washington, D.C.

12-17—AMPAC Campaign Management School, Washington, D.C.

17-19—WV Chapter, Am. Academy of Family Physicians 3rd Annual Family Practice Weekend & Sports Medicine Conference, Huntington.

December

3-6—AMA Interim Meeting, Honolulu.

January

26-28—WVSMA 23rd Mid-Winter Clinical Conference, Charleston.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Lamont D. Nottingham, Ed.D., CME Coordinator, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Nottingham, (304) 347-1243; and Hall, (304) 348-9580.

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Brownsville, PA, ★ General Hospital, 11 A.M.—Aug. (no program)

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Aug. 16, Dementia: Diagnostic Evaluation, Robert Miller, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Aug. 1, MRT & CT Scans, Use & Misuse, Deborah Willard, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—Aug. 17, Using Lasers in Surgery, Romeo Lim, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Aug 15 (tba)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—Aug. (no program)

Montgomery, • General Hospital, 12 P.M.—Aug. 2 (tba)

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Aug. (no program)

Parkersburg, ★ Camden-Clark Hospital 7 A.M.—Aug. (no program)

Ripley, • Jackson General Hospital, 12:30 P.M.—Aug. 11, Fibrocystic Disease, G. Cendana, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Aug. 15 (tba)

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Aug. (no program)

Weston, ★ Stonewall Jackson Hospital, 6:30 P.M.—Aug. (no program)

CME Accreditation Approved for 1989 Annual Meeting

The West Virginia University School of Medicine is entitled by the Accreditation Council of Continuing Medical Education (ACCME) to award credits in continuing medical education for physicians. The Office of CME certifies that this continuing medical education conference meets criteria for 11.5 credit hours in Category 1 of the Physicians Recognition Award of the American Medical Association.

The Annual Meeting program will carry 11½ Prescribed Credit Hours as approved by the American Academy of Family Physicians.

"If it tastes good, don't eat it. If you enjoy it, don't do it. If it's boring, tedious and pure drudgery, make it your lifestyle."

Convention Program

122nd ANNUAL MEETING

West Virginia State Medical Association

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 16-20, 1989

PROGRAM COMMITTEE

Michael J. Lewis, M.D.
Morgantown
Chairman

James L. Bryant, M.D.
Clarksburg

C. Richard Daniel, M.D.
Beckley

Derrick L. Latos, M.D.
Wheeling

Michael A. Morehead, M.D.
Parkersburg

Maurice A. Mufson, M.D.
Huntington

Stephen L. Sebert, M.D.
Lewisburg

WEDNESDAY MORNING
August 16

9:30—Pre-Convention Meeting of the Council. Cordell A. De La Pena, M.D., Presiding (McKinley Room).

12 Noon-4:30—Registration, Exhibit Center.

WEDNESDAY AFTERNOON

2:45—First Session of the House of Delegates. Bill M. Atkinson, M.D., Presiding (Governor's Hall).

Invocation—Charles E. Turner, M.D., Huntington.

Presidential Address—Bill M. Atkinson, M.D., President, West Virginia State Medical Association.

Presentation of AMA-ERF Grants to the West Virginia and Marshall University Schools of Medicine.

Address—Rufus K. Broadaway, M.D., Member, Board of Trustees, American Medical Association, Miami, FL. Subject: "AMA Faces Its Challenges."

Business Meeting.

WEDNESDAY EVENING

6:30-7:30—Presidential Reception (Taft Room Foyer).

THURSDAY MORNING
August 17

8:30-4:30—Registration, Exhibit Center.

First General Session
Governor's Hall/Exhibit Center

Derrick L. Latos, M.D., Moderator

Opening Exercises

9:45—Call to Order—Bill M. Atkinson, M.D., President, West Virginia State Medical Association.

Invocation—Joe N. Jarrett, M.D., Oak Hill.

Address of Welcome—Bill M. Atkinson, M.D.

Introduction of Members of the 1989 Program Committee.

10:00—"The Thomas L. Harris Address"—Edward R. Annis, M.D., Past President, American Medical Association, Miami Shores, FL. Subject: "New Challenges, New Opportunities."

10:45—Questions and Answers.

11:00—Coffee Break to Visit Exhibits.

11:30—The Honorable William A. Sederburg, Chairman, Senate Health Policy Standing Committee, Michigan State Senate, Lansing, MI. Subject: "The Doctor and The Politician."

12:15—Questions and Answers.

12:30—Recess for Lunch.

THURSDAY AFTERNOON

12:30—Luncheon Meeting. Component/Specialty Society Presidents and Hospital Chiefs of Staff/Medical Staff Presidents. Bill M. Atkinson, MD, President, Presiding (Fillmore Room).

2:00—Golf, Tennis and Volley Ball Tournaments.

2:00-4:00—Risk Management Seminar. The PIE Mutual Insurance Company. Len Bittner, Vice President, Risk Management, Presiding (West Virginia Room).

4:00—Committee on Resolutions. Derrick L. Latos, M.D., Chairman, Presiding (Tyler Room).

THURSDAY EVENING

6:30-7:30—Cocktail Party. CNA Insurance Company and McDonough Caperton Insurance Group, Hosts (Exhibit Center).

FRIDAY MORNING
August 18

8:00-4:30—Registration, Exhibit Center.

Second General Session
Governor's Hall/Exhibit Center

Robert M. D'Alessandri, M.D., Moderator

8:45—Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, West Virginia University Health Sciences Center, School of Medicine, Morgantown. Subject: "Lyme Disease: The Latest Great Imitator."

9:30—Coffee Break to Visit Exhibits.

10:00—Robert W. Cantrell, M.D., Fitz-Hugh Professor and Chairman, Department of Otolaryngology—Head and Neck Surgery, University of Virginia Medical Center, Charlottesville, VA. Subject: "External Influences on the Practice of Medicine."

10:45—Robert J. Kobet, AIA, Registered Architect, Owner, Energy Design Associates, Butler, PA. Subject: "Allergy Free Non-Toxic Environment: The Effect of the Built Environment on Our Health."

11:30—Questions and Answers.

11:45—Recess for Lunch.

FRIDAY AFTERNOON

12:00—Luncheon and Meeting, Executive Council, West Virginia Psychiatric Association. Paul L. Clausell, M.D., President, Presiding (Chesapeake Bay).

2:00—Scientific Meeting, West Virginia Psychiatric Association. Paul L. Clausell, M.D., Presiding (West Virginia Room).

Guest Speaker: Donald C. Fidler, M.D., Associate Professor, Department of Behavioral Medicine and Psychiatry, West Virginia University Health Sciences Center, School of Medicine, Morgantown. Subject: "Ethics and Psychiatry."

3:30—Business Meeting, West Virginia Psychiatric Association. Paul L. Clausell, M.D., Presiding (West Virginia Room).

12:30—Luncheon Meeting, Publications Committee, Stephen D. Ward, M.D., Chairman, Presiding (Tyler Room).

12:30—Luncheon Meeting, West Virginia Medical Institute, Inc., Board of Trustees Meeting. Harry S. Weeks, Jr., M.D., Presiding (Wilson Room).

12:30—West Virginia Chapter, American College of Emergency Medicine, C. David Burkland, M.D., President, Presiding (Hayes Room).

Guest Speaker: Derrick L. Latos, M.D., Wheeling. Subject: "Dialysis Patients in the Emergency Department."

1:00—Business and Scientific Meeting, West Virginia Neurosurgical Society and WVSMA's Section on Neuroscience, Ralph O. Dunker, M.D., President, Presiding (Buchannon Room).

1:00—Scientific Meeting, West Virginia Academy of Ophthalmology, Michael A. Fiery, M.D., President, Presiding (Grant Room).

Guest Speaker: Terry L. Schwartz, M.D., Assistant Professor of Ophthalmology, Department of Ophthalmology, West Virginia University Health Sciences Center, School of Medicine, Morgantown. Subject: "Does the Baby See?"

(Note: Session open to general attendance).

2:00—Business Meeting, West Virginia Academy of Ophthalmology, Michael A. Fiery, M.D., President, Presiding (Grant Room).

1:00—Business Meeting, West Virginia Orthopedic Society, Stephen I. Lester, M.D., President, Presiding (Taft Room).

Guest Speakers: Esther Weeks of Wheeling, Chairman, WESPAC; and Dee Crabtree, WVSMA Staff Person.

3:00—Scientific Meeting, West Virginia Orthopedic Society, Stephen I. Lester, M.D., President, Presiding (Taft Room).

Guest Speaker: Robert Gillespie, M.D., F.R.C.S. (C) (Ed.), Professor and Chairman, Department of Orthopedic Surgery, University at Buffalo, School of Medicine and Biomedical Sciences; and Head, Department of Orthopedics, Children's Hospital of Buffalo, Buffalo, NY. Subject: "Congenital Abnormalities of the Femur."

3:00—WVSMA Section on Dermatology, William A. Welton, M.D., Presiding (Virginia Room).

Case Presentations.

3:00—Open Meeting, WESPAC, Esther Weeks, Chairman, Presiding (Fillmore Room).

3:30—Business and Scientific Meeting, West Virginia Chapter, American Academy of Pediatrics, Joseph W. Werthammer, M.D., President, Presiding (Chesapeake Bay).
Guest Speaker: Norman D. Ferrari III, M.D., Assistant Professor, Pediatrics and Internal Medicine, and Chief, General Pediatrics and Adolescent Medicine, West Virginia Health Sciences Center, School of Medicine, Morgantown. Subject: "Toxic Shock Syndrome."

4:00—West Virginia Radiological Society, James K. Sexton, M.D., President, Presiding (Pierce Room).

Guest Speaker: E. Ralph Heinz, M.D., Professor and Chief, Neuroradiology Section, Department of Radiology, Duke University Medical Center, Durham, NC. Subject: "MR Assessment of Vascular Disease."

FRIDAY EVENING

5:00—Committee on Nominations. David Z. Morgan, M.D., Chairman, Presiding (Tyler Room).

6:00-7:00—Cocktail Party. West Virginia University School of Medicine Alumni Association. Robert M. D'Alessandri, M.D., Dean, WVU School of Medicine; and Thomas L. (Tim) Stover, M.D., Vice President, WVU School of Medicine Alumni Association, Presiding (Ballroom).

6:00-7:00—Cocktail Party. West Virginia Chapter, Medical College of Virginia Alumni Association. Stephen M. Ayres, M.D., Dean, Medical College of Virginia/Virginia Commonwealth University, In Charge (Ballroom).

6:00-7:00—Cocktail Party. Medical Alumni Association, University of Virginia. William C Morgan, Jr., M.D., Presiding (Old White Club).

9:45-10:45—Entertainment by "Mainstreet"—Seven vibrant singers/dancers and three top-notch instrumentalists. Complimentary After Dinner Drinks (Chesapeake Room).

Entertainment Hosted in Part by RMI, ltd., of Charleston; and After Dinner Drinks Courtesy PIE Mutual Insurance Company of Cleveland, OH.

SATURDAY MORNING
August 19
Breakfast Meeting

7:30—WVSMA Committee on Cancer. Catalino B. Mendoza, Jr., M.D., Chairman, Presiding (Wilson Room).

8:00-12 Noon—Registration, Exhibit Center.

Third General Session
Governor's Hall/Exhibit Center

Charles H. McKown, Jr., M.D., Moderator

8:45—Ulf Westblom, M.D., Assistant Professor of Medicine, Department of Medicine, Section of Infectious Diseases, Marshall University School of Medicine, Huntington. Subject: "The Role of Campylobacter pylori in Gastritis and Peptic Ulcer Disease."

9:30—Coffee Break to Visit Exhibits.

10:15—Theodore A. Kotchen, M.D., Professor and Chairman, Department of Medicine, West Virginia University Health Sciences Center, School of Medicine, Morgantown. Subject: "Disease Prevention in the Practice of Medicine."

11:00—E. Ralph Heinz, M.D., Professor and Chief, Neuroradiology Section, Department of Radiology, Duke University Medical Center, Durham, NC. Subject: "Magnetic Resonance Imaging of the Brain and Spine."

11:45—Questions and Answers.

12 Noon—Recess for Lunch.

SATURDAY AFTERNOON

12 Noon-3:00—Registration, Greenbrier Registration Lobby.

12:30—Luncheon Honoring Past Presidents, Visiting Neighboring State Presidents and 50-Year Medical Graduates. Cordell A. De La Pena, M.D., Immediate Past President; and Bill M. Atkinson, M.D., President, Co-Hosts (Taft Room).

1:00—Business Meeting. West Virginia Young Physicians. Stephen L. Sebert, M.D., Presiding (Jackson Room).

2:30—Second and Final Session of the House of Delegates. Bill M. Atkinson, M.D., Presiding (Eisenhower Room, Parlors A and B).

Invocation—William E. Gilmore, M.D., Parkersburg.

Address: The Honorable Gaston Caperton, Governor of the State of West Virginia.

Presentation of New Officers of the West Virginia State Medical Association Auxiliary.

Presentation of Honor Guests.

Business Meeting.

Election of Officers.

Installation of Derrick L. Latos, M.D., of Wheeling, as President of the West Virginia State Medical Association.

Address: Derrick L. Latos, M.D.

Adjournment.

SATURDAY EVENING

6:30-7:30—Reception Honoring Newly Installed Officers of the Association and Auxiliary, (Colonial Lounge).

A Word of Thanks

The 1989 Program Committee, officers, members and staff of the West Virginia State Medical Association wish to acknowledge with sincere thanks grants received from the following firms to help support the Scientific Program for this year's 122nd Annual Meeting:

GLAXO

ELI LILLY AND COMPANY
PHARMACEUTICAL DIVISION

THE UPJOHN COMPANY

. . . And, We Wish to Thank:

ALLEN & HANBURYS, DIVISION OF GLAXO INC. for Providing Refreshments for one of the Coffee Breaks in the Exhibit Center.

CHAPMAN PRINTING COMPANY for Hosting the Pre-Convention Luncheon for the Executive Committee and Council on Wednesday, August 16.

GENERAL MEDICAL CORPORATION for Contributing the Exhibitors' Grand Door Prize.

CNA INSURANCE COMPANY and McDONOUGH CAPERTON INSURANCE GROUP for Hosting the Thursday Evening, August 17, Reception in the Exhibit Center.

THE GREENBRIER for Contributing the Physicians' Grand Door Prize of a Winter Weekend for Two at the Hotel.

MARION LABORATORIES for Golf Tournament Prizes.

PFIZER PHARMACEUTICALS for Providing Refreshments for one of the Coffee Breaks in the Exhibit Center.

PIE MUTUAL INSURANCE COMPANY for Hosting After-Dinner Drinks during Friday Evening, August 18, Entertainment.

RMI LIMITED for its Contribution toward Friday Evening, August 18, "Main Street" Entertainment.

A. H. ROBINS COMPANY for Tennis Tournament Prizes.

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE for Providing Refreshments for one of the Coffee Breaks in the Exhibit Center.

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE, MEDICAL COLLEGE OF VIRGINIA AND UNIVERSTY OF VIRGINIA SCHOOL OF MEDICINE ALUMNI ASSOCIATIONS for Hosting Receptions on Friday Evening, August 18.

Delegates and Alternates

BOONE (2)—Names not submitted at press time.

BROOKE (2)—Delegates, W. T. Booher, Jr., Wellsburg. Alternates, Patsy P. Cipoletti, Jr., Wellsburg, and Rogelio L. Velarde, Follansbee.

CABELL (17)—Names not submitted at press time.

CENTRAL WV (4)—Delegates, Clemente Diaz, Richwood; Arnold F. Gruspe and Porfirio R. Pascasio, Weston; Rigoberto Ramirez, Buckhannon. Alternates, William D. Given, Gassaway; and Eusebio L. Villaneuva, Glenville.

EASTERN PANHANDLE (5)—Delegates, Edward F. Arnett, Martinsburg; James D. Helsley, Berkeley Springs; Harvey D. Reisenweber, Robert S. Strauch and H. Alexander Wanger, Martinsburg. Alternates, D. Ewell Hendricks and C. Vincent Townsend, Martinsburg.

FAYETTE (3)—Delegates, Fred L. Akerberg, Charlton Heights; Samuel R. Davis, Mt. Carbon; and Joe N. Jarrett, Oak Hill.

GREENBRIER VALLEY (4)—Names not submitted at press time.

HANCOCK (3)—Names not submitted at press time.

HARRISON (7)—Delegates, T. H. Chang, Chinmay K. Datta, Erlinda L. De La Pena, Clarksburg; Julian Gasataya, Lumberport; Robert D. Hess, Clarksburg; M. V. Kalaycioglu, Shinnston; and Jaime Lazaro, Clarksburg. Alternates, John A. Bellotte, James L. Bryant, James A. Genin, Clarksburg; Ray A. Harron, Bridgeport; Leon R. Lapointe, C. B. Mendoza, Jr., and Carlos A. Naranjo, Clarksburg.

JEFFERSON (2)—Names not submitted at press time.

KANAWHA (25)—Delegates, Constantino Y. Amores and Alberto G. Capinpin, Charleston; Richard A. Capito, South Charleston; Jerrill D. Cavender, Charleston; Angel M. Cinco, South Charleston; Robert J. Clubb, Glenn Crotty, Jr., Robert L. Ghiz, David B. Gray, Roland E. Hamrick, Jr. and Sherman E. Hatfield, Charleston; Richard D. Hayes, South Charleston; Robert L. Hively, Dunbar; George W. Hogshead, Nitro; Fred F. Holt, James W. Kessel, Daniel B. MacCallum, Toncy C. Majestro and Jimmie L. Mangus, Charleston; John V. Merrifield, Dunbar; Lionel J. Nair, Warren Point, Joseph T. Skaggs and Ronald L. Wilkinson, Charleston.

Alternates, Alfonso Y. Amores, Steven A. Artz, B. H. Avashia, Clinton A. Briley, Jr., Nicholas Cassis, Jr., and Stephen P. Cassis, Charleston; William D. Crigger and W. Alva Deardorff, South Charleston; Donald E. Farmer, Bruce A. Foster, Thomas J. Janicki, Lester Labus, Robert L. Leadbetter, Mary Lou Lewis, Lewis H. McConnell, William O. McMillan, Jr., Donald H. Moore, Lee L. Neilan and Asif Rahman, Charleston; Richard C. Rashid, South Charleston; William C. Revercomb, Jr., William G. Sale and Paul R. Santrock, Charleston; Muhib S. Tarakji, South Charleston; and Charles C. Weise, Charleston.

LOGAN (4)—Delegates, Harry D. Fortner and Ray M. Kessel, Logan; Thomas P. Long, Man; and Rodney L. Stephens, Logan. Alternates, Riad S. Al-Asbahi, Logan; Isabello A. Fernandez, Man; Raymond O. Rushden and S. N. Subramaniam, Logan.

MARION (5)—Names not submitted at press time.

MARSHALL (3)—Delegates, Kenneth J. Allen, Glen Dale; and Howard Neiberg, Wheeling.

MASON (2)—Names not submitted at press time.

MCDOWELL (2)—Delegates, Jeffrey P. Palmer and Louis A. Vega, Welch. Alternates, Alexander L. Herland, Welch.

MERCER (7)—Delegates, Philip J. Branson, Princeton; T. Keith Edwards and John J. Mahood, Bluefield; Florencio Neri, Princeton; Bhasker Pujari, Edward M. Spencer and Theodore P. Werblin, Bluefield. Alternates, Larry V. Carson, G. D. Duremdes and David J. Larkin, Princeton, Daniel P. Noble, Bluefield; Thomas I. Park, Princeton; and Alan A. Rosenbloom, Bluefield.

MINGO (3)—Names not submitted at press time.

MONONGALIA (24)—Names not submitted at press time.

OHIO (12)—Delegates, William G. Bell and Ellen L. Kitts, Wheeling.

PARKERSBURG ACADEMY (9)—Names not submitted at press time.

POTOMAC VALLEY (3)—Delegates, Nabal B. Giron, Romney; and Carl A. Liebig, Keyser.

PRESTON (2)—Delegates, Paul A. Getty and Timothy C. Miller, Kingwood. Alternates, Bernice A. Schwarzenberg and Michael R. Schwarzenberg, Kingwood.

PUTNAM (2)—Names not submitted at press time.

RALEIGH (9)—Delegates, Joshy Abraham, M. Jamil Ahmed, William C. Covey, Jr., Ahmed Faheem, Prospero B. Gogo, Ramon C. Jereza, Robert P. Pulliam, Mario C. Ramas and Iligino Salon, Beckley. Alternates, Prudencio C. Corro, C. Richard Daniel, Jr., Cee Ann Davis, Shoukry L. Francis, Lewis W. Gravely, Richard D. Richmond, Norman W. Taylor, Nancy R. Webb and Francis J. Whelan, Beckley.

SOUTH BRANCH VALLEY (2)—Delegates, Felino C. Barnes and Donald O. Hindman, Petersburg. Alternates, Bruce W. Leslie and Larry C. Rogers, Petersburg.

SUMMERS (2)—Delegate, Jack D. Woodrum, Hinton.

TYGART'S VALLEY (5)—Delegates, Fouad H. Abdalla, Elkins; Fulvio R. Franyutti, Karl J. Myers, Jr. and Mary Elizabeth Myers, Philippi; and Samuel M. Santibanez, Grafton. Alternates, Charles L. Arnett, Philippi; Donald C. Carter, Elkins; Halberto G. Cruz, Philippi; James B. Magee, Elkins; and Christopher Z. Villaraza, Grafton.

WESTERN (3)—Names not submitted at press time.

WETZEL (2)—Names not submitted at press time.

WYOMING (2)—Names not submitted at press time.

Official Program

65th ANNUAL MEETING

West Virginia State Medical Association Auxiliary

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 16-19, 1989

WEDNESDAY AFTERNOON
August 16

1:00-5:00—Registration, Lower Lobby.

3:30—Pre-Convention Board Meeting, Mrs. Ginny Reisenweber (Harvey), President, presiding (Hayes Room).

6:30—WVSMA President's Reception (Taft Room). Auxilians cordially invited.

THURSDAY
August 17

9:00-5:00—Registration, Lower Lobby.

9:30—Formal Opening of the Convention, Mrs. Ginny Reisenweber (Harvey), President, presiding (Hayes Room).

Invocation

Pledge to Flag and Pledge of Loyalty—Mrs. Lois Spencer (Edward).

In Memoriam—Mrs. Debbie Lesko (Terry).

Introduction of Honored Guests and Past State Presidents.

Presentation of Bill M. Atkinson, M.D., President, West Virginia State Medical Association, and Executive Director, WVSMA.

Introduction of Convention Chairmen, Mrs. Eileen Martin (Bruce) and Mrs. Ruth Gilbert (Gary).

Roll Call of Delegates—Mrs. Helen Bell (David), Recording Secretary.

Declaration of a Quorum—Mrs. Esther Weeks (Harry, Jr.), Parliamentarian.

Keynote Address—Mrs. Jean Hill (Edward), President, American Medical Association Auxiliary.

Credentials and Registration—Mrs. Brenda Swearingen (Van).

Convention Rules of Order—Mrs. Eileen Martin (Bruce).

Report of the 1988 Convention Reading Committee—Mrs. Ann Hunt (John) and Mrs. Myla Amsbury (Harry).

Treasurer's Report—Mrs. Astri Jarrett (Joe)

Recommendations from the Pre-Convention Board Meeting.

New Business.

Election of the 1989 Nominating Committee.

Reports of Officers and Standing Committee Chairmen (These will not be read, but are published in the Annual Program Book).

Presentation of Regional Directors:

Northern—Mrs. Marjorie Naymick (George)

Southern—Mrs. Ann McRae (Grady)

Eastern—Mrs. Priscilla Stump (Michael)

Western—Mrs. Sally Lowe (Robert)

Central—Mrs. Joyce Magee (Alfred)

Announcements.

Recess.

Note: Door prizes will be drawn throughout the meeting; you must be present to win.

1:30—Tennis. Raleigh County, Host.

6:30—Cocktail Party. CNA Insurance Company and McDonough Caperton Insurance Group, Hosts (Exhibit Center).

FRIDAY
August 18

9:00-12 Noon—Registration, Lower Lobby.

8:00—Past President's Breakfast (Wilson Room).

9:30—Auxiliary's Second General Session (Hayes Room).

Introduction of Honored Guests and Past State Presidents.

Roll Call of Delegates—Mrs. Helen Bell (David).

Declaration of a Quorum—Mrs. Esther Weeks (Harry, Jr.)

Presentation of AMA-ERF Awards—Mrs. Marian Thompson (James) and Mrs. Alice Edwards (Keith), Co-Chairmen. Recognition of AMA-ERF Grants to the West Virginia and Marshall University Schools of Medicine.

Presentation of Membership Awards—Mrs. Lois Spencer (Edward), President-Elect and Membership Chairman.

Announcement and presentation of awards received at AMA Auxiliary Convention in June.

Address—Mrs. Barbara Thibodeaux (David), President, Southern Medical Association Auxiliary.

Southern Medical Awards—Mrs. Denny Fischer (Herman), Southern Medical Councilor.

Convention Announcements.

Reports of Convention Committees:

Credentials and Registration—Mrs. Brenda Swearingen (Van).
Press and Publicity—Mrs. Evelyn Meany (Mark).
Unfinished Business.
Report of Tellers.
Report of the 1989 Nominating Committee—Mrs. Denny Fischer (Herman), Immediate Past President and Chairman of Nominating Committee.

Election of Officers.
Installation of Officers—Mrs. Jean Hill (Edward), President, AMA Auxiliary.
Presentation of President's Pin and Gavel—Mrs. Ginny Reisenweber (Harvey).
Presentation of Past President's Pin—Mrs. Denny Fischer (Herman).
Inaugural Address—Mrs. Lois Spencer (Edward).
Announcements.
Adjournment.

12:30—President's Luncheon (Crystal Room).

2:00—Bridge, Harrison County, Host (Trellis Lobby).

SATURDAY
August 19

10:00—Post-Convention Board Meeting—Mrs. Lois Spencer (Edward), President, presiding (Hayes Room).

2:30—Second and Final Session of WVSMA House of Delegates (Eisenhower Room).

Note: You must be registered to participate in the business sessions and the recreational activities. Registration fee, $5.00.

1989 Annual Meeting Exhibits Commercial and Scientific

Booth 1
Miles Inc.
West Haven, CT

Representatives of Miles Inc. wish to extend a cordial invitation to physicians to visit Booth No. 1. Representatives will be on hand to discuss their featured products, Cipro, an oral antibiotic and Mezlin, an injectable antibiotic.

Representatives: Ralph Williams and Byron Misak

Booth 2
MSG Billing Service
Charleston, WV

MSG Billing Service will occupy Booth No. 2 and invite you to stop by and see how their computer billing service operates.

Representative: Myrna S. Griffith

Booth 3
WV Easter Seal Society
Wheeling, WV

The West Virginia Easter Seal Society will occupy Booth No. 3. Representatives will be on hand to discuss their equipment, photos and slides. Phamphlets will also be available.

Representative: Shari Sturm

Booth 4
WV Department of Health, WIC Program
Charleston, WV

Please stop by and visit the WV Department of Health in Booth No. 4. On hand will be information regarding the special supplemental food program for Women, Infants and Children (WIC) of the WV Department of Health which provides nutritious foods to supplement the diet of approximately 35,000 West Virginians who are "high risk" for nutrition-related health problems. WIC provides a unique combination of food, nutrition education and health care which further helps prevent problems in pregnant, postpartum, and breastfeeding women, infants and children up to five years of age.

Representatives: Denise Ferris and Helen Hardman

Booth 5
Philippine Medical Association of WV
Man, WV

Please stop by and visit Booth No. 5, The Philippine Medical Association of WV. The PMAWV was founded in 1984 in Charleston, WV and is an organization of filipino-American physicians. Besides performing humanitarian 2acts, it also provides continuing medical education programs with their medical counterpart in the Philippines.

Representative: Rano S. Bofill, MD and Eligino Salon, MD

Booth 6
Medical Alumni Relations
Medical College of Virginia/Virginia Commonwealth University
Richmond, VA

Representatives: Cynthia M. Heldberg and Joan Glynn

Booth 7
WVU Geriatric Program
Morgantown, WV

Please stop by and visit with representatives of the WVU Geriatric Program, Booth No. 7. The display will feature descriptions of each facet of the program as well as photographs of the staff and patients/clients, pamphlets detailing the Geriatric Program and its 65 Plus Clinic.

Representative: David Z. Morgan, MD

Booth 8
WV Department of Health/AIDS Surveillance
Charleston, WV

Please stop by Booth No. 8 and visit with respresentatives of the WV Department of Health. AIDS reporting and surveillance information, AIDS case definition classification system and HIV and AIDS brochures will be featured.

Representative: Jody Robinson

Booth 9

(Information not available at press time.)

Booth 10
PIE Mutual Insurance Company
Cleveland, OH

Representatives of PIE Mutual Insurance Company invite you to stop by Booth No. 10 where professional medical liability information will be available.

Representatives: James A. Winterick and John Esterle

Booths 11 and 12
Abbott Laboratories
North Chicago, IL

You are cordially invited to visit the Abbott exhibit which will feature Hytrin® (terazosin HCl), Tranxene® T-Tab™ (Clorazepate dipotassium), PCE® (erythromycin particles in tablets), Ogen® (estropipate) and Physician Office Diagnostics.

Representatives: (Information not available at press time.)

Booth 13
New Spirit Enterprises (NSE), Inc.
Columbia, MD

(Information not available at press time.)

Booth 14
WV Division of Health
Charleston, WV

Through partnerships with the WV Division of Health and local governments, local health departments provide many basic public health services which are necessary for the State's economic growth and development. These include infectious disease control, chronic disease screening, family planning, maternal and child health, immunizations, and home health care programs. Representatives invite you to stop by Booth No. 14 where information on the above will be featured.

Representatives: Lizabeth Broughton, Ann Garcelon and David Rice

Booth 15
Dorsey Pharmaceuticals
East Hanover, NJ

Dorsey Pharmaceuticals invites you to stop by Booth No. 15 where representatives will be glad to provide you with information on all their products and educational materials.

Representatives: (Information not available at press time.)

Booth 16
U.S. Navy
Louisville, KY

Stop by and visit with the U.S. Navy in Booth No. 16 and discuss the employment opportunities waiting for you.

Representative: Lt. Terry S. Molnar

Booth 17
Ross Laboratories
Columbus, OH

Representatives cordially invite you to stop by Booth 17, Ross Laboratories, makers of a complete line of medical nutritional products to ensure adequate nutrition, vitamins and minerals. Also on display will be a choice of pediatric nutritional products for the growing infant in the first year.

Representatives: Dean Fliotsos, Phil Pini and Joe Shay

Booth 18
CIBA-GEIGY Corporation
Summit, NJ

CIBA-GEIGY Corporation invites you to visit representatives in Booth No. 18 where featured products will include: Voltaren and Nsaid (treatment of arthritis); Lopressor and Beta Blocker (treatment of high blood pressure and AMI, Angina); and Trans Derm Nitro (nitroglycerin patch for treatment of angina).

Representatives: Mark R. Post and James Adkins

Booth 19
Medical Data Systems
Charleston, WV

Representatives of Medical Data Systems invites you to stop by Booth No. 9 where they will be featuring their computer equipment.

Representatives: Terry Iden, Terry Unrue, Allen Dean, Bob Duncan and Allen Gawthrop

(Information not available at press time.)

Booths 20 and 21
CNA/McDonough Caperton Professional Liability Insurance
Chicago, IL

CNA/McDonough Caperton Insurance Companies invite you to stop by Booth Nos. 20 and 21. Representatives will be on hand to discuss their professional liability insurance programs with you.

Representatives: Bob Harding, Sarah Dore and Ralph Ellis, CNA; Steve Brown and Leslie Rogers, McDonough Caperton

Booth 22
West Virginia University Hospitals
Morgantown, WV

WVU Hospitals invite you to stop by Booth No. 22. Information on services offered at WVU Hospitals and Ruby Memorial will be featured.

Representatives: Tamerlyne Cummings and Martha S. Reinhardt

Booth 23
WVU School of Medicine—MARS
Morgantown, WV

WVU School of Medicine will feature their MARS program (Medical Access and Referral System) in Booth No. 23. Representatives invite you to stop by.

Representative: Carol Paserba

Booth 24
Chestnut Ridge Hospital
Morgantown, WV

Please stop by Booth No. 24 where information and brochures on the Chestnut Ridge Hospital will be available.

Representative: William E. Shires

Booth 25
WVU School of Medicine
Morgantown, WV

Information concerning the WVU School of Medicine will be featured at Booth No. 25. Representatives invite you to stop by and visit with them.

Representatives: Pat Penn, Kendra Vandall, Diana Knott and Tim Penn

Booth 26
Smith Kline & French Laboratories
Philadelphia, PA

We cordially invite you to visit the Smith Kline & French Laboratories exhibit in Booth No. 26 where representatives will be on hand to answer your questions and provide information on their products and services.

Representatives: (Information not available at press time.)

Booth 27
Parke-Davis
Morris Plains, NJ

Parke-Davis representatives invite you to visit them in Booth No. 27 where they will be happy to discuss their full line of pharmaceutical products with you.

Representatives: (Information not available at press time.)

Booth 28
Glaxo, Inc.
Research Triangle Park, NC

Glaxo, Inc. invites you to stop by Booth No. 28 and discuss their products.

Representative: Dave Youmans

Booth 29
Insurance Corporation of America
Houston, TX

ICA cordially invites you to stop by and visit with representatives in Booth No. 29 who will welcome the opportunity to discuss their programs regarding professional liaiblity insurance for physicians.

Representative: Jerry Morgan

Booth 30
Bristol Laboratories
Evansville, IN

Booth No. 30 will be occupied by Bristol Laboratories. Representatives invite you to stop by and discuss their featured products: K-Lyte® , Naldecon® , Naldecon X-Line® and Questran® .

Representatives: John W. Thomas and George A. Cuadrado

Booth 31
Roche Laboratories
Nutley, NJ

Representatives of Roche Laboratories invite you to stop by Booth No. 31. Rocephin will be featured.

Representatives: Vedrick Boney, Joe Kaylor and Bruce Cover

Booth 32
Roche Biomedical Laboratories
Burlington, NC

Representative: Betsy Mitchell

Booth 33
Linde Homecare Medical Systems
Nitro, WV

You are cordially invited to stop by Booth No. 33 where representatives of Linde Homecare Medical Systems will have on display oxygen therapy equipment.

Representatives: Ed Bridgette, Tom Brown and Bob King

Booth 34
Camden-Clark Memorial Hospital
Parkersburg, WV

Please stop by and visit with representatives in Booth No. 34, Camden-Clark Memorial Hospital. Brochures regarding the hospital and community will be available. Representatives: Beverly Walkup and Jennifer Anderson

Booth 35
Burroughs Wellcome Co.
Research Triangle Park, NC

Burroughs Wellcome Co. cordially invites you to stop by Booth No. 35 and visit with their representatives who will be happy to discuss with you their full line of pharmaceutical products.

Representatives: Deborah Forst and Ray Chiappini

Booth 36
Quantum Health Resources
Charleston, WV

Please stop by and visit with representatives at Booth 36. Quantum Health Resources will feature home IV and hemophiliac products, pumps and supplies.

Representatives: David E. Cummons, Debby Kiser and Ken Stickney

Booth 37
Family Medicine Foundation of WV
Charleston, WV

The Family Medicine Foundation of WV will display materials relating to its function as the philanthropic arm of the WV Chapter, American Academy of Family Physicians in Booth No. 37. A handmade quilt will be given away as a fundraiser. You do not need to be present to win. The drawing will be held at the Nov. 17-19, 1989, Family Practice Weekend and Sports Medicine Conference at the Radisson Hotel, Huntington, WV.

Representatives: Chris Ferrell and Alice Jo Hess

Booth 38
United Hospital Center
Clarksburg, WV

Information related to the United Hospital Center will be featured in Booth No. 38. Featured will be medical staff directories, physician practice opportunities, educational opportunities and hospital service directories.

Representative: David C. Salsberry

Booth 39
Provider Office Services and Telecommunications, Inc.
(POST +)
Charleston, WV

POST + will occupy Booth No. 39 and invite you to stop by and talk with representatives about their physician's practice management system and software.

Representatives: Nancy Lofton and Cheryl Vetter

Booth 40
A. H. Robins Company
Richmond, VA

You are cordially invited to visit the A. H. Robins Company exhibit, Booth No. 40, and meet with representatives who will welcome the opportunity to discuss their products, Tenex and Micro-K.

Representatives: (Not available at press time.)

Booth 41
The Industrial Rehabilitation Center, Inc.
Charleston, WV

Plea se stop by and visit with representatives of Booth No. 41, The Industrial Rehabilitation Center. IRC will feature professional services such as physical therapy, functional capacities evaluation, work hardening and injury prevention clinics.

Representatives: Stuart Porter, Lori Jo Magano and Stan Forrest

Booth 42
RMI Limited
Charleston, WV

(Information not available at press time.)

Booth 43
The Upjohn Company
Cincinnati, OH

Representatives of The Upjohn Company cordially invite you to stop by Booth No. 43 and discuss with them their featured products: XANAX® , MICRONASE® , HALCION® , ROGAINE® AND ANSAID® .

Representative: George A. McClain

Booth 44
Sandoz Pharmaceuticals
East Hanover, NJ

Sandoz Pharmaceuticals invites you to stop by Booth No. 44 and visit with their representatives. Information on their products and educational material will be available.

Representatives: (Information not available at press time.)

Booth 45
Medical and Professional Systems
Charleston, WV

Representatives in Booth No. 45, Medical and Professional Systems, invite you to stop by and visit. Medical office management systems with an emphasis on elctronic billing to Medicare will be featured.

Representatives: Bradley E. Layne, Linda C. Ireland and Robert E. Root

Booth 46
West Virginia Medical Institute
Charleston, WV

Please stop by and visit with representatives of the West Virginia Medical Institute, Booth No. 46. WVMI will introduce their Physician Reviewer Handbook along with dates of scheduled training sessions. Updates on the Third Scope of Work will also be presented. A working computer terminal will be available for confidential online data inquiries for individual provider/practitioner profiles focusing on utilization, quality, and DRG problems. Informal discussions will be held on the impact of quality review and the severity levels for 1989-1991. Requests for information and comments on the program will be appreciated.

Representatives: Harry S. Weeks, Jr., MD, Betty C. Kirkwood, Nadine Cogar, Stephen West-Fisher, Kathleen Merrill, Louise Nelton, Mikki Payne, JoAnn Estes and Lora Mathias

Booth 47
Winthrop Pharmaceuticals
New York, NY

Representatives of Winthrop Pharmaceuticals, Booth No. 47, invite you to stop by and discuss their featured products: Omnipaque (brand of iohexol), Inocor and Danocrine.

Representatives: Peter Cosco, John Mamula, Jay Rapp and Judy Weaver

Booth 48
Squibb-Nova, Inc.
Charleston, WV

Novolinpen-Dial-a-Dose Insulin Delivery System, Novolin 70/30, the first human pre-mixed insulin available in the US and a complete line of Novolin human insulins will be featured in Booth No. 48, Squibb-Nova, Inc.

Representatives: Anne Anderson, Tom Maletic and Terry Fenhoff

Booth 49
US Army Health Professional Support Agency
Falls Church, VA

Representatives in Booth No. 22, US Army, invite you to stop by and discuss several vacancies available which exist for board-certified physicians in their medical department. Unique professional opportunities are available at locations in the United States and overseas.

Representatives: Major Brian L. Friedman and Major Gary Placek

Booth 50
Marion Laboratories, Inc.
Kansas City, MO

Marion Laboratories will occupy Booth No. 50 and invite you to stop by and discuss their featured products: CARAFATE (sucralfate), unsurpassed healing rate and safety record in the treatment of duodenal ulcer; and CARDIZEM SR (diltiazem HC1) sustained release capsules for hypertension.

Representatives: (Not available at press time.)

Booth 51
Schering Corporation
Kenilworth, NJ

Vancenase AQ, Proventil and Uni-Dur will be the featured products on display in Booth 29, Schering Corporation.

Representatives: Joseph Sassler and Al Williams

Booth 52
Miles Inc., Diagnostics Division
Elkhart, IN

Seralyzer III will be the featured product on display by Miles Inc., Diagnostics Division, Booth No. 52.

Representatives: Robert Kidd and A. G. Chesson

Booth 53
Disability Determination Section
Charleston, WV

You are cordially invited to visit Booth No. 53, the Disability Determination Section exhibit and meet with representatives. Revised categorical listings of impairments, consultative examination guides and information on social security disability benefits will be featured.

Representative: Tom Davis

Booth 54
Mead Johnson Pharmaceuticals
Evansville, IN

Mead Johnson cordially invites you to visit Booth No. 54 and meet with their representatives. Featured products include: Buspar® , Desyrel® , Duricef® and Klotrix® .

Representatives: (Not available at press time.)

Booth 55
Wallace Laboratories
Cranbury, NJ

Representatives of Booth No. 55, Wallace Laboratories, invite you to stop by and discuss information on all of their ethical products.

Representatives: (Not available at press time.)

Booth 56
Charleston Area Medical Center
Charleston, WV

Information and brochures relating to CAMC hospital services will be featured in Booth No. 56. Representatives invite you to stop by.

Representatives: Melissa C. Long, Paul Ostasiewski and William B. Ferrell, Jr.

Booth 57
MetPath Inc.
South Charleston, WV

Reference laboratory services will be featured in Booth No. 57 and MetPath representatives invite you to stop by.

Representatives: Evette Sheppard and Sam Rhodes

THE WHEELING CLINIC

WHEELING, WEST VIRGINIA 26003

JAMES B. HAZLETT, Executive Director

Wheeling, 234-2000 • St. Clairsville, (614) 695-2511 • New Martinsville area, 455-2222 • Wellsburg-Steubenville area, 737-3700
Martins Ferry area, (614) 633-1517 • Warwood area, 277-2222 • Colerain area, (614) 635-3676 • toll-free no. out of state, 1-800-422-2339

INTERNAL MEDICINE

General
B. L. VanPelt, M. D.
P. R. Hedges, M. D.
R. N. Lewis, M. D. (St. Clairsville)
R. D. Morris, D. O. (New Martinsville)
C. McCool, M. D. (St. Clairsville)
T. Gary Kenamond, M. D.

Peripheral Vascular Disease
J. D. Holloway, M. D.

Cardiovascular
A. M. Valentine, M. D.
W. E. Noble, M. D.

Gastroenterology
T. E. Chvasta, M. D.

Hematology/Oncology
C. A. Vasquez, M. D.

Nephrology Associates, Inc.

Pulmonary
T. V. Burke, M. D.

Rheumatology
M. A. Stevens, M. D.

ENDOCRINOLOGY
C. McCool, M. D.

GENERAL SURGERY
E. C. Voss, M. D.
J. H. Mahan, M. D. (St. Clairsville)
R. L. Cross, M. D. (Martins Ferry)

THORACIC AND CARDIOVASCULAR SURGERY
H. Shackleford, M. D.

ORTHOPEDICS
E. L. Barrett, M. D.
R. S. Glass, M. D.
J. Melia, M. D.

UROLOGY
D. C. Trapp, M. D.
B. M. McCuskey, M. D.

GYNECOLOGY
R. W. Lebold, M. D.

OBSTETRICS & GYNECOLOGY
T. A. Atharl, M. D.
J. W. Campbell, M. D.
C. V. Porter, M. D.

OPHTHALMOLOGY
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangillnan, M. D.
D. Simbra, M. D.
Kathryn M. Clark, O. D.

OTOLARYNGOLOGY/ MAXILLO-FACIAL SURGERY
W. A. Tiu, M. D.
A. G. Matadar, M. D.

RADIOLOGY
Valley Radiologists, Inc.

FAMILY PRACTICE
G. L. Cholak, M. D. (St. Clairsville)
E. L. Coffield, M. D. (Martinsville)
G. E. Sella, M. D. (Colerain)
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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Mohs Surgery Cure Rate 98 Per Cent

A surgical technique with a 98-per cent cure rate for skin cancer is now available at the Health Sciences Center.

Dermatologist Rodney Kovach uses Mohs Micrographic Surgery (MMS) to achieve these unsurpassed cure rates and provide patients with the best cosmetic results attainable.

In MMS, thin horizontal sections of the cancer are removed layer by layer. Each section is examined systematically under a microscope before the next section is removed.

"We are able to examine all the margins around the cancerous eruption and to trace out any contiguous tumors with their 'silent extensions,' which are often missed by other methods and are a common cause of a cancer's recurrence," Doctor Kovach said.

"This process insures that all the cancer is removed and the maximum amount of normal tissue is preserved, which reduces scarring."

Wisconsin Originator

MMS is named for Frederic E. Mohs of the University of Wisconsin, who brought it into practical use for skin cancers. Doctor Kovach, who learned the procedure from Mohs, is one of the few dermatologists in the country who perform MMS and the only one in West Virginia.

About 90 per cent of the 500,000 non-melanoma skin cancers that occur in the United States each year are successfully treated by conventional techniques such as electrosurgery, cryosurgery, radiation therapy, and standard surgical excision.

Ten per cent of the treated cancers recur, the vast majority of them on the head and neck where they can result in significant functional and cosmetic damage. Before MMS, the overall cure rate for these recurrent cancers was only 60 per cent. With Mohs surgery, 90 per cent of recurrent cancers are cured with a single treatment.

MMS is usually performed on an outpatient basis, generally on a single day. Removal and examination of each section takes about 45 minutes. Doctor Kovach performs Mohs surgery at University Health Associates Colonial Park Physicians office in Morgantown.

Doctor's Bequeath Nearly $1 Million

WVU has received nearly $1 million from the estate of a WVU graduate.

The late Genevieve G. Dutton, M.D., a 1944 alumnus, named the WVU Foundation as the primary beneficiary of her estate. Doctor Dutton died December 13, 1987, in Fairlea after a long illness. She bequeathed the Foundation $897,755 for unrestricted University support.

Doctor Dutton was born in Fredericks Hall, Virginia. She gained her baccalaureate degree from WVU and, following two additional years as a medical student, completed her education at the Medical College of Virginia where she received her M.D. degree.

Before retiring to White Sulphur Springs in 1967, Doctor Dutton spent 12 years as a psychiatrist at the Athens State Hospital in Ohio.

Foundation President James A. Robinson said the fact that the gift is not restricted to one specific area of support will help the university as a whole.

"This kind of generosity has a wide-ranging, beneficial effect on the entire University because it can be applied in areas where the needs are greatest," Robinson said.

Her husband, the late Dr. Wayne Wilson Dutton, died in 1965.

Gabriele Radiology Chair Dedicated

WVU School of Medicine dedicated the Orlando F. Gabriele Chair of Diagnostic Radiology this summer in honor of the physician who has been Chairman of the Department of Radiology for the past 17 years.

The endowment came from within the Department of Radiology, and a significant number of contributions also were received from former residents and faculty of the department.

"Proceeds of the endowment will be used to attract faculty interested in clinical investigation and other academic pursuits. Since the chair is specifically in diagnostic radiology, much of the research it will spawn will involve new imaging technology and the impact technological changes have on diagnosis," Doctor Gabriele said.

Included in the plans is development of a learning center which will be a resource for continuing medical education for the faculty, residents and physicians throughout the state.

Doctor Gabriele, a native of North Providence, Rhode Island, was graduated summa cum laude from Brown University, and received his medical degree from Yale University. Before coming to WVU in 1972, he taught at Yale and at the University of North Carolina.

He is eminently respected for his diagnostic skills, and much of the growth of the Department of Radiology during the past 17 years has been in keeping pace with technological developments related to diagnosis, from CT scans to magnetic resonance imaging.

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MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

Medical Student 'Training Camp'

More than a dozen students entering the School of Medicine decided to trade their last weeks by the swimming pool for a strenuous five-week educational "training camp."

Their goal: to hit the ground running when classes start for real in August.

The students are part of the medical school's new Pre-Enrichment Program—PEP for short. According to Linda Savory, M.D., PEP is one of the first wave of programs in the United States to deal with a new generation of medical students.

"Across the nation, we're seeing medical students who are coming to medicine from backgrounds very different from those of the traditional medical student of the past," said Doctor Savory, Assistant Dean for Curriculum Development. "The new students are just as capable of becoming outstanding physicians, but they often come from less scientific backgrounds. They may have chosen a college major other than pre-med, for example, or pursued another career for a few years before deciding to become a physician.

"PEP is a very progressive way of addressing students' needs while making certain that we maintain—or even approve—the quality of the doctors we educate," she added. "We believe there will be a significant trend toward this kind of program nationwide."

Doctor Savory said PEP has three primary goals: to broaden students' basic science knowledge, to show them how this knowledge ties directly to patient problems, and to extend their learning skills.

PEP features science lectures and labs, presented at the accelerated pace of medical school, as well as using the newer techniques of computer-assisted and problem-based learning.

The Marshall program takes a multidisciplinary approach, with lectures from faculty members in physics, chemistry, biology and biochemistry. In addition, three learning specialists help students improve their learning skills through individual and group sessions.

Touchon Leads African Workshop

Robert Touchon, M.D., led a workshop at the Fourth International Interdisciplinary Conference on Hypertension in Blacks June 28-July 2 in Nairobi, Kenya.

Doctor Touchon, Chief of Cardiology, led the workshop and a round-table discussion with physicians from George Washington University and the University of Michigan. They discussed methods of mobilizing medical students to give them not only a lifelong commitment to reducing cardiovascular disease but also the skills needed to combat effectively the nation's leading killer.

Last year, Marshall received a $552,000 Preventive Cardiology Academic Award from the National Institutes of Health. MU was one of just four United States medical schools to receive the grant in 1988.

The Marshall program, directed by Doctor Touchon and Marie Veitia, M.D., is using innovative techniques to help medical students become more aware of heart disease and to increase their ability to prevent, recognize and treat it.

Two MU Students In NIH Research

Marshall medical students Kimberly Burgess and John Carl have been selected to participate in the highly competitive summer research program of the National Institutes of Health.

Burgess worked in the Clinical Neuroscience Branch of the National Institute of Mental Health, and expected her work to involve studies of brain chemistry.

Carl worked in the Bio-organic Chemistry Laboratory of the National Institute of Diabetes and Digestive and Kidney Diseases. He expected to study the effects of cancer-causing materials on metabolism.

"It's truly exceptional for Marshall's medical school to have two students selected for this nationally competitive program," said Patrick I. Brown, M.D., Associate Dean for Medical Student Affairs. "Hundreds of highly qualified students nationwide apply for this program, and only about 75 are selected."

Faculty Receive Promotions, Tenure

Seven faculty members have been approved for promotions effective with the beginning of the fall term, and 12 qualified for tenure effective July 1.

Promoted to professor were Bryan Larsen, Ph.D., obstetrics and gynecology; Peter J. Kasvinsky, Ph.D., biochemistry, and Stephen A. Wolf, M.D., surgery.

Promoted to associate professor were Gretchen Oley, M.D., medicine; Marc A. Subick, M.D., medicine; Monica Valentovic, Ph.D., pharmacology; and Sasha Zill, Ph.D., anatomy.

Receiving tenure were Andrew J. Burger, M.D., medicine; Jody Gottlieb, M.S.W., psychiatry; Patricia J. Kelly, M.D., pediatrics; Thomas W. Kiernan, M.D., medicine; Nancy J. Munn, M.D., medicine; Shirley Neitch, M.D., medicine; Linda M. Savory, M.D., family and community health; Danny Wedding, Ph.D., psychiatry; William E. Wheeler, surgery; and Doctors Subic, Oley and Valentovic.

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Wespac Members

Listed below are additional 1989 WESPAC members reported to the *Journal* since those published in the June issue. New WESPAC members will be reported next month.

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Constantino Y. Amores
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W. Edward Duling
Jerry W. Edens
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Victor P. Salutillo
Arvind B. Shah
*N. T. Shanmugham
*Richard Sibley
*Joseph A. Smith
*Horatio A. Spector
*Alfredo C. Velasquez
*Martin S. Wershba

Logan
Boppana P. Rao

Marshall
Jesus T. Ho

Mercer
Douglas G. Burnette
Stephen A. DeGray
Mohammad Roidad
Mary J. Smith

Monongalia
*Walter A. Bonney, Jr.
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Francis C. Huber, Jr.
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*Harry Shannon
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Raleigh
*Mohammed K. Hasan
Rajindra P. Singh
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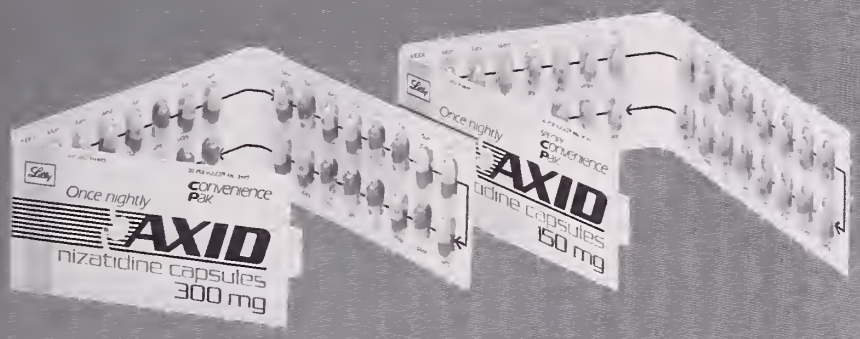

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3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H_2-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H_2-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the *Physicians' Desk Reference (PDR)*. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

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VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema:* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function:* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia. Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure, patients should be advised to consult with the physician.

Hyperkalemia. Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome: Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category.

Cardiovascular: Cardiac arrest; myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*), cardiac arrest; pulmonary embolism and infarction, rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486

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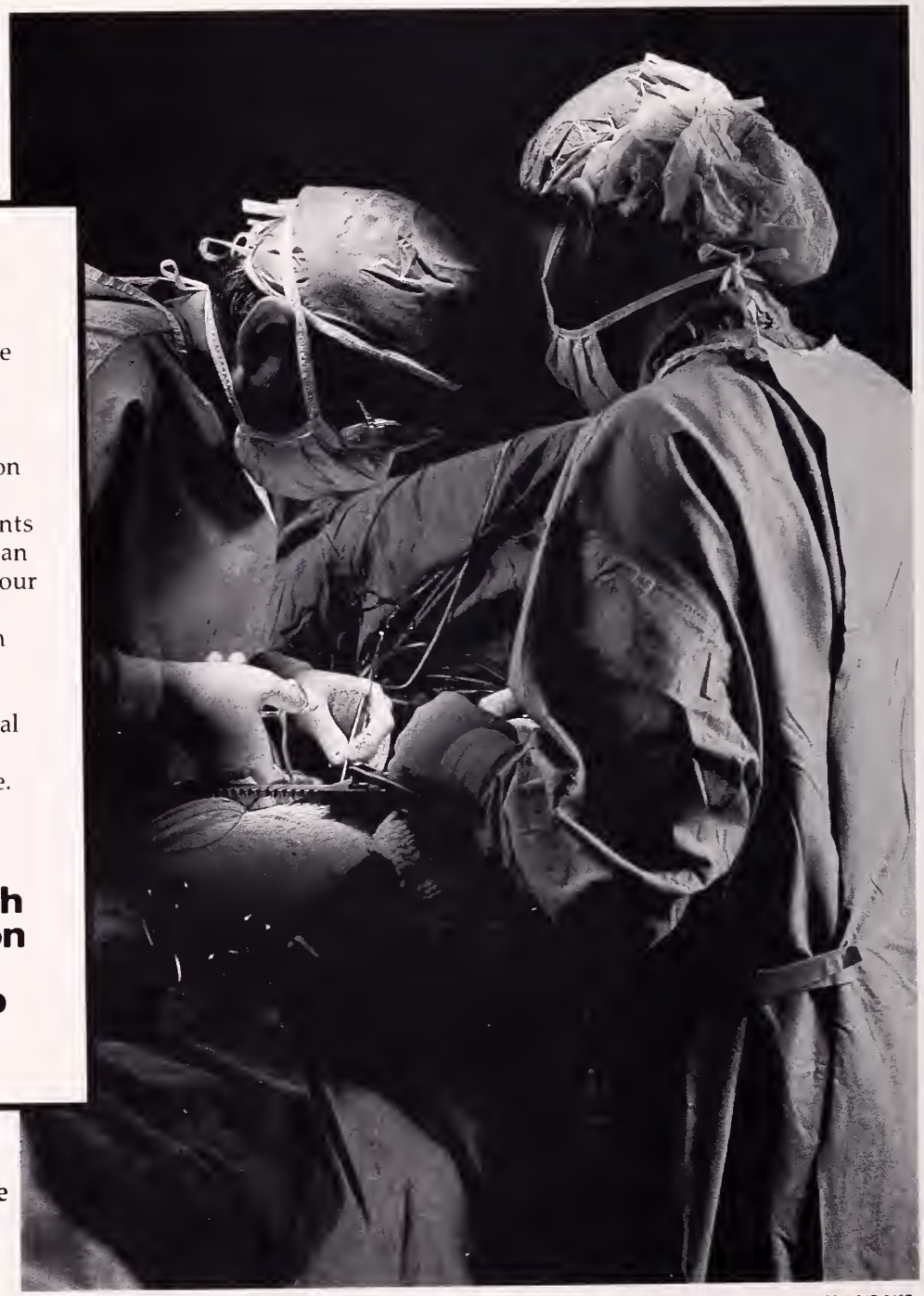

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA
PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

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Vasectomy Complications at a Family Practice Center

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Vasectomy is a safe, effective, economical, and convenient form of permanent sterilization since it can be performed in an outpatient setting. Seventy-three vasectomies were performed during a nine-year period at the Kanawha Valley Family Practice Center. The procedures were performed by family practice residents under the active instruction and supervision of the attending staff.

The complication type and frequency are as follows: epididymitis, 5.5 per cent; sperm granuloma, 2.7 per cent; wound infection, 1.4 per cent, and hematoma, 12 per cent. No failures occurred in this study group. All of the complications were minor and responded to conservative medical management.

The results of this study reveal that vasectomy complications at this teaching family practice center are comparable to those reported in the medical literature. This study therefore supports the opinion that vasectomies can be performed safely and taught by trained family practitioners in the outpatient setting.

Introduction

Vasectomy is considered by many to be the "best" form of permanent sterilization. The procedure is safe, effective, economical, and convenient since it can be performed in an outpatient setting. It is the general consensus of the medical community that elective vasectomy should be readily available to mature, competent, fully informed men who desire permanent sterilization (1).

Family physicians may learn to perform vasectomies during their residency training. The purpose of this study is to identify the type and frequency of vasectomy complications occurring at the Kanawha Valley Family Practice Center, which is the free-standing ambulatory care facility for the Kanawha Valley Family Practice Residency Program.

No deaths have been attributed to vasectomies in the United States, but several complications may occur with this procedure. The type and frequency of complications in patients who had vasectomies performed by family physicians are comparable to those reported in the urologic literature (2). Several recent large studies have shown no substantial risk of long-term complications of the procedure (3, 4).

"This study . . . supports the opinion that vasectomies can be performed safely and taught by trained family practitioners in the outpatient setting."

Methods

The medical records were reviewed retrospectively on all patients who had vasectomies performed at the Kanawha Valley Family Practice Center from August, 1978, to October, 1987. A total of 73 vasectomies were performed during this nine-year period.

The type and frequency of postoperative vasectomy complications was obtained along with the patient's age, referral source, type of preoperative counseling, findings on physical examination and preoperative laboratory studies, type of sedation and anesthesia, operative procedure, postoperative instruction, pathology specimen reports, and postoperative sperm count results.

Results

Of the 73 patients who had vasectomies, 60 were referrals from the West Virginia Statewide Family Planning Program, and 13 were registered patients of the Kanawha Valley Family Practice Center. The mean age was 33 years old, with a range from 24 to 58 years.

All patients received similar preoperative counseling, medical history and physical examination, and laboratory studies (CBC and urinalysis).

Seventy-two of the patients had preoperative sedation with I.V. diazepam and local anesthesia using two-per cent lidocaine. One patient received triazolam 0.25mg. s.l. 30 minutes prior to the procedure and local anesthesia with two-per cent lidocaine.

Seventy two of the patients had similar operative techniques that consisted of isolating each vas deferens through a separate one- to two-cm. incision. Then one cm. of the vas was excised and the ends doubly ligated using silk suture. Good hemostasis was achieved and the skin closed with simple interrupted silk sutures. One patient required an extended horizontal incision in order to locate the vas deferens. All 73 patients were seen in followup one week postoperatively for suture removal.

All of the 73 patients' surgical specimens were submitted for

*This article was written while Doctor Beavers was a senior Family Medicine Resident at the Kanawha Valley Family Practice Residency Program, South Charleston, West Virginia

pathologic examination, and all were reported as normal vas deferens. All of the patients received similar oral and written post-operative instructions. Sperm counts were obtained on all 73 patients at four months after vasectomy and all were reported as negative for sperm.

The procedures were performed by family practice residents under the active instruction and supervision of the attending staff.

A summary of postoperative vasectomy complications occurring in this study group is found in Table 1.

Discussion

The results of this study reveal that vasectomy complications at the Kanawha Valley Family Practice Center are comparable to those reported in the medical literature (5-8). Table 2 compares the complication rate in this study group with the complication rates of 13 series of vasectomies reviewed by Leader and associates.

Although the overall complication rate was 22 per cent, all of the complications were minor and responded to conservative medical management without hospitalization. It is important to note that there were no reported failures or spontaneous recannulation during this nine-year period.

Hematoma was the most frequent complication noted in this study group. About 50 per cent of all complications were hematomas. However, all of the hematomas were small in size and did not require surgical evacuation. Perhaps inexperience of the surgeons can explain in part the high hematoma rate, since an increased rate of hematoma has been noted in the medical literature in surgeons performing fewer than 10 vasectomies per year (8). Mild ecchymosis is common after vasectomy. Absolute hemostasis during the operation is mandatory if hematomas are to be prevented, since extravasated blood is not well contained by loose tissue planes of the spermatic cord and scrotum. Pfenninger recommends leg elevation in addition to scrotal support and cold compresses (1). Perhaps leg elevation and rest the first 12 to 24 hours should be added to the routine post-vasectomy orders at the Kanawha Valley Family Practice Center instead of "up and about as desired" (Table 3). In addition, a statement regarding the need for contraception until after the four-month semen sample is reported negative is also recommended to be included on this list of orders. Also, patient noncompliance with postoperative instructions may play a significant role in the development of hematoma since noncompliance was mentioned in a few of the patients' medical records.

One study suggests that the low rate of sperm granuloma can perhaps be explained by the observation that non-urologists may be less likely to recognize sperm granulomas than the urologist and thus tend to under-report (8). In addition, lower rates might be related to variations in surgical technique.

An expert panel convened by the Association for Voluntary Surgical Contraception has recommended using local anesthesia alone for vasectomies since preoperative I.V. sedation is more expensive, less safe, and requires that the patient not be allowed to drive after the procedure (9). A recent survey revealed that 28 per cent of physicians performing vasectomies prefer local anesthesia combined with I.V. sedation (8). No complications were noted in this study using I.V. sedation.

Conclusion

In conclusion, the results of this study support the opinion that vasectomies can be performed safely and taught by trained family practitioners in the outpatient setting.

TABLE 1
Complication Type and Frequency of 73 Patients After Vasectomy at K.V.F.P.C.

Type	*Number*	*Percent (%)*
Epididymitis	4	5.5
Sperm Granuloma	2	2.7
Wound Infection	1	1.4
Hematoma	9	12.0
Failure	0	0
Scrotal Abscess	0	0

TABLE 2
Comparison of Vasectomy Complication Rates of K. V. F. P. C. to Those in Medical Literature

Type	*Study Group (%)*	*Literature Review (%)*
Epididymitis	5.5	0.4 - 6.1
Sperm Granuloma	2.7	4.9 - 10.0
Wound Infection	1.4	1.0 - 1.5
Hematoma	12.0	0 - 18.0
Failure	0	0 - 6.0
Scrotal Abscess	0	0 - 5.5

TABLE 3
Post-Vasectomy Orders at the Kanawha Valley Family Practice Center

Athletic support for three (3) days
Ice bag to Genital Area
Up and about as desired following surgery
No strenuous exercise for three (3) days
Tylenol for pain - Every four (4) hours, if needed
Suture removal in seven (7) days
No sexual relations for seven (7) days
Sperm Count in four (4) months
Shower or Bath after two (2) days

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Massive Hemothorax and Groshong Catheters

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Central vascular access with cannulation of either the subclavian or internal jugular vein is a common procedure in the hospital. Complications are rare, but may be severe. We report a case with a near fatal complication in the form of massive hemothorax 19 days after placement of a Groshong catheter.

Introduction

Central vascular access, either through the subclavian or internal jugular vein, is a common procedure in hospitals today, especially in areas of critical care. It is employed for hemodynamic monitoring, as an access for hemodialysis and plasmapheresis, a route for pacemaker placement, and routinely done for intravenous infusions and total parenteral nutrition when peripheral lines fail. Complications in these procedures are rare, but do occur even when proper technique has been applied. The most common complication is pneumothorax, and is the reason for routine chest x-rays following central vein catheterizations. Most complications will manifest themselves in the period immediately following the procedure; however, some complications such as slow bleeds may take a long time to become clinically apparent.

We report a patient who had a near-fatal complication 19 days after placement of a Groshong catheter.

Case Report

A 27 year-old white male, paralyzed from his chest (level of T_4) down following a motor vehicle accident 10 years earlier, was admitted to the Huntington Veterans Administration Medical Center because of urosepsis. The patient had a chronic vesicotomy and a history of recurrent urinary tract infections. On admission, he was hypotensive 70/50, febrile (to 104° F) and diaphoretic. On physical examination the patient was found to have two huge decubitus ulcers, one on each buttock, with necrotic tissue draining a dark green, foul-smelling discharge. He had purulent urine draining from his foley catheter. Laboratories showed a markedly elevated WBC with a shift to the left, and a chronic anemia with hgb 8.0 gm/dL. A urinalysis showed presence of WBCs and RBCs, and was loaded with bacteria. Chest x-ray, EKG and other laboratory tests were normal. Both urine and cultures from the decubiti showed multiply resistant *Pseudomonas aeruginosa*. The patient was treated with amikacin and ceftazidime, but peripheral IV access soon became a problem. A Groshong catheter placement was then attempted at the left subclavian vein, but was unsuccessful. A second attempt was done on the right side and proper placement confirmed by chest x-ray. No complication was noted, and both lung fields were fully expanded. The patient was given a two-week course of I.V. antibiotics and debridement of his decubiti. He showed good clinical improvement, and plans for skin grafting of his ulcers were made.

> ***"Our case is . . . a reminder of the importance of considering a complication to the procedure, even if several days have passed."***

Three weeks after admission, on the 19th day after his initial unsuccessful catheter placement, the patient suddenly complained of acute onset of dyspnea. This was associated with left-sided, pleuritic chest pain and shoulder pain. He was tachycardic, had a systolic BP of 70, and showed a low-grade temperature. EKG showed sinus tachycardia but was otherwise normal. Chest x-ray revealed haziness involving almost the whole left lung. The house staff initially suspected pulmonary embolism, and the patient was started on heparin. A V/Q scan was scheduled for the next day, but a C.T. scan of the chest the next morning showed a massive pleural effusion encroaching and pushing the left lung anteriorly. Heparin was discontinued. Attempts at thoracentesis were unsuccessful. Insertion of a chest tube, however, drained 1,500 cc of serosanguinous fluid with several blood clots. This provided immediate relief of the patient's symptoms. The chest tube was later removed after permanent reexpansion of the lung.

Discussion

Although central vein cannulation is a commonly employed procedure for vascular access, it is far from benign, as was clearly shown in this case. Numerous reports in the literature discuss which is the best and safest approach. In their review of the complications related to subclavian catheter insertion, Vanherweghem *et al.* (1) recommended that the right subclavian route was preferable, the reason being that the left subclavian cannulation is more traumatic for the superior vena cava and more associated with massive vein thrombosis. On the other hand, Holt *et al.* (2) found that using a left supraclavicular approach to the subclavian vein is safer, simpler and speedier than the infraclavicular route.

Though opinions may vary depending on the indication or use of the line, they all agree that attention to technique as well as awareness of the possible complications are vital in avoiding a fatal outcome. McGoon *et al.* (3) have reported an inverse relationship between the experience of the operator and the rate of complications. They have suggested that a precise understanding of the

anatomy and a good working knowledge of the superficial landmarks of the chest be prerequisites, and that inexperienced physicians attempting central vein cannulation should be closely supervised.

The most common complication, as reported by McGoon *et al.* (3), is pneumothorax (zero to six per cent), with hemothorax a mere third. However, in another series by Vanherweghem *et al.* (1) where catheters were inserted for vascular access for hemodialysis, the incidence of pneumothoraces or hemothoraces was the same, between one to two per cent.

Pneumothorax most often is minimal to moderate, and often self-limiting. It is rarely fatal when detected early and appropriate treatment initiated. Hemothorax, on the other hand, is usually reported less frequently, but may be more likely to prove fatal. Causes are laceration of the subclavian vein (2, 4), infusion of blood into the pleural space, pulmonary artery perforation, and penetration of adjacent structures such as right atrium, pericardium and parietal pleura (5). Most complications are noted early, but delayed onset of this one has been reported (4, 6). When late complications occur, they are associated with a poorer outcome.

Our case is unusual in that 19 days passed before the patient developed symptoms from his complication. We believe that he most likely developed a slow bleed from the unsuccessful attempt at left subclavian vein cannulation. Because of his sensory losses and minimal physical activity secondary to his spinal injury, he did not manifest any symptoms until his entire lung had been pushed anteriorly and caused respiratory compromise.

Once the correct diagnosis had been made, the patient responded well to the initiated therapy. Our case is, however, a reminder of the importance of considering a complication to the procedure, even if several days have passed. Maintaining a certain degree of suspicion for possible complications and investigating whether new symptoms may be attributable to the line insertion could lead to early detection and elimination of serious morbidity.

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Guillain-Barre Syndrome

Another Immune-Mediated Disease With a Predilection for Young Women?

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Although the epidemiology of Guillain-Barre syndrome (GBS) has been studied extensively, some important aspects remain unrecognized. In a retrospective study of 92 patients with GBS, we identified an apparent increased frequency in young women, an epidemiological feature shared with other immune-mediated neurological diseases such as myasthenia gravis and multiple sclerosis.

Introduction

Although Guillain-Barre syndrome (GBS) is a relatively frequent neuromuscular disorder, most details of its epidemiology have been learned since the late 1970s. These features are an overall incidence of 1-2/100,000/year, a slight overall male predominance, and an incidence generally increasing with age (1-2). Interest in the association between immunization for A/New Jersey (swine flu) influenza given in late 1976 and GBS has resulted in a significant increase in available epidemiologic data (3). Although not recognized per se, extensive epidemiologic surveys in the United States show two peaks in age-adjusted numbers of patients with GBS, one occurring in adolescents and young adults, and the other occurring in patients 50-70 years old (3-6). This pattern has been recognized once previously (7). We report our epidemiologic experience over the past 20 years at the West Virginia University Health Sciences Center.

Methods

Medical records of patients admitted to the West Virginia University Health Sciences Center between 1967 and 1987 with acute neuropathies were reviewed in order to identify patients with GBS. Only data concerning those patients who fulfilled the recognized criteria for GBS were analyzed (8). Population figures and patient referral bases and patterns in West Virginia, southwestern Pennsylvania and western Maryland were used to determine approximate incidence rates. The West Virginia University Health Sciences Center serves as the primary or tertiary hospital for about 50 per cent of the population in this region.

Results

Ninety-two patients who fulfilled the criteria for diagnosis of GBS were identified. The age and gender

and the approximate age and gender-adjusted incidence rates are shown in the Table and Figure.

Discussion

The results of this relatively small study, including the overall incidence rate, agree with data from larger studies which showed bimodal peaks in age-adjusted incidence rates (3-6). Additional analysis of the data from the national GBS surveillance system called attention to the bimodal incidence rate peaks of GBS (9) not commented upon in previous reports (4-6). Bimodal incidence rate peaks of GBS have also been recognized recently in Australia (10). Our experience suggests that the early incidence peak in GBS is due almost entirely to an increased incidence of GBS in adolescent and young adult women (Figure). Although the numbers involved in this small study preclude statistical significance, review of illustrated data from previous large studies of age- and gender-adjusted incidence rates of GBS also suggests that the early incidence peak of GBS is due to an increased frequency of GBS in adolescent and young adult women (age 15-30 years) (6-9). These studies thus serve to validate our conclusion. This apparent and generally unrecognized epidemiological feature of GBS, if real, may have pathogenic implications for those cases of GBS occurring in younger women. Similar pathogenic mechanisms and influences might also be responsible for the increased incidence in young women of other immune-mediated neurologic diseases such as myasthenia gravis and multiple sclerosis.

TABLE

Age and Gender Characteristics and Approximate Age and Gender-Adjusted Incidence Rates of GBS in 92 Patients with GBS Admitted to the West Virginia University Health Sciences Center Between 1967 and 1987.

	Numbers of GBS Patients			*Incidence Rates (per 100,000/yr) of GBS*		
Age (years)	*Male*	*Female*	*Combined*	*Male*	*Female*	*Combined*
0 - 9	5	5	10	1.3	1.3	1.3
10 - 19	7	9	16	1.5	2.0	1.8
20 - 29	6	12	18	1.4	2.9	2.2
30 - 39	8	6	14	1.9	1.4	1.7
40 - 49	4	2	6	1.2	0.6	0.9
50 - 59	4	7	11	1.6	2.8	2.2
60 - 69	8	3	11	3.6	1.3	2.4
70 +	3	3	6	1.4	1.4	1.4
Total	45	47	92	1.7	1.7	1.7

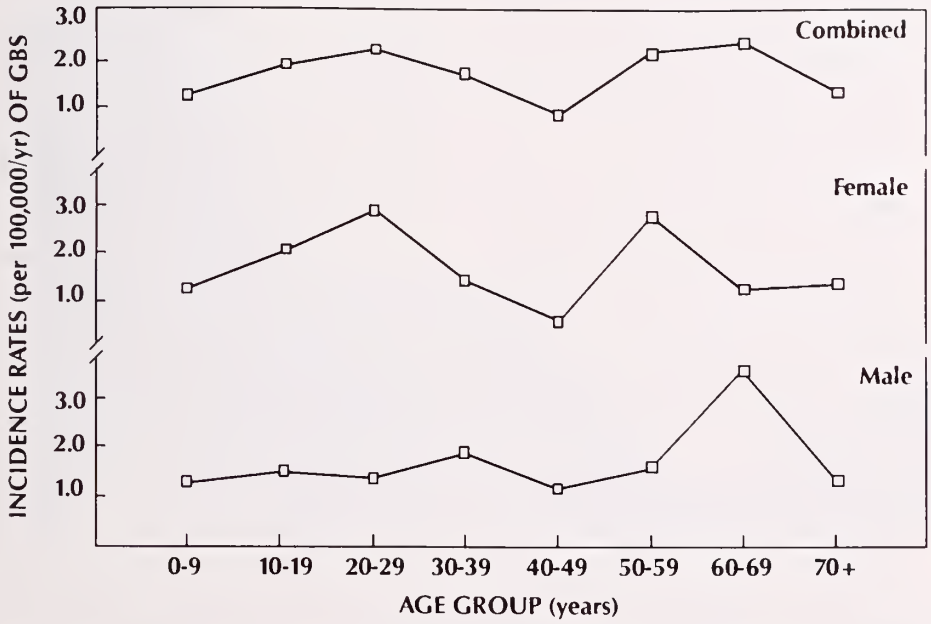

Figure. Approximate age and gender-adjusted GBS incidence rates in 92 patients with GBS admitted to the West Virginia University Health Sciences Center between 1967 and 1987.

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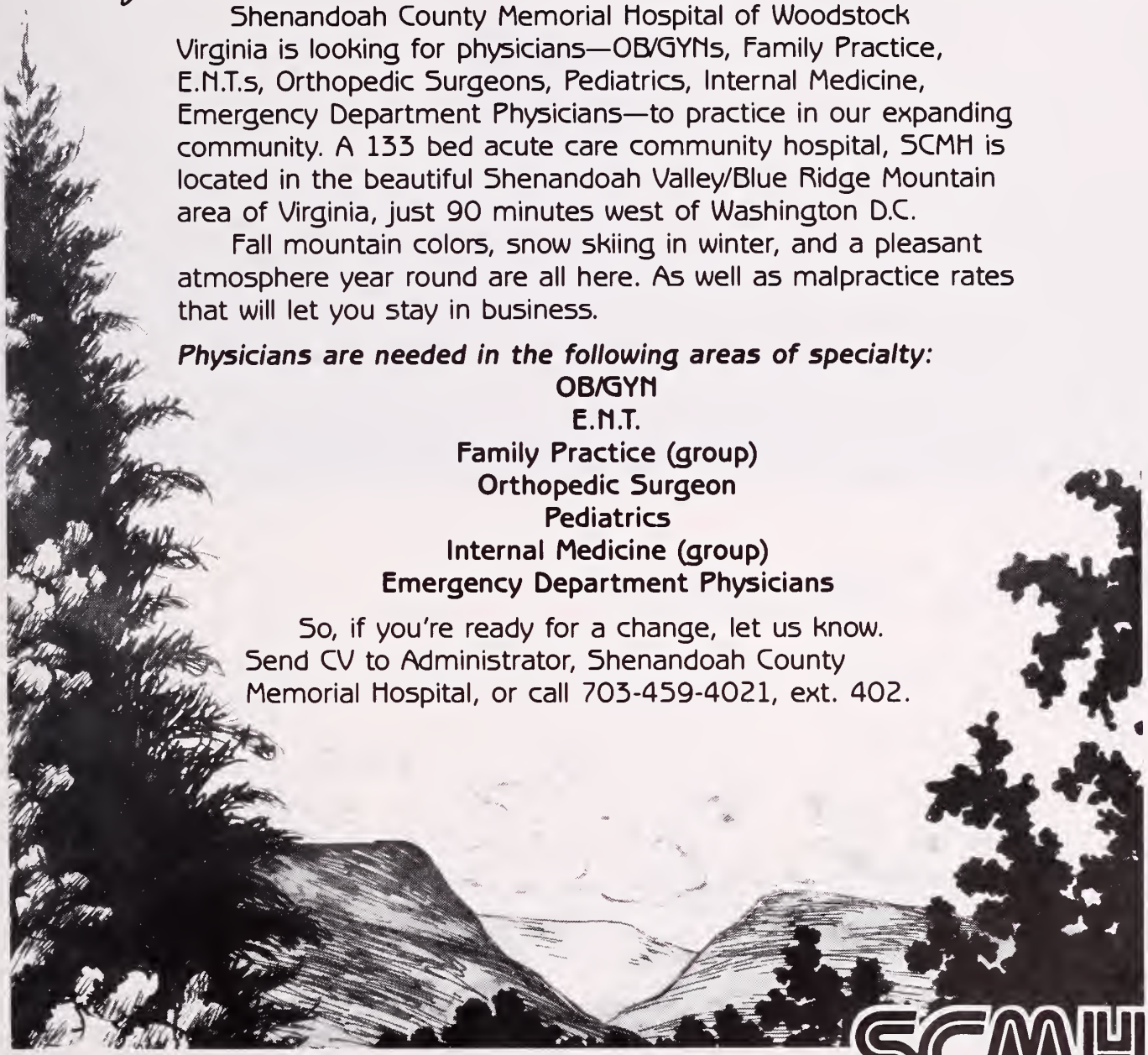

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Special Article

Gifts of the Land

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Editor's Note: See also Editorial on Page 395.

The Wildlife Endowment Fund was created by the West Virginia Legislature in 1986 to help assure future generations of West Virginians the same access to wildlife and wildlife-related activities (i.e. hunting, fishing, bird watching, etc.) that we in the state have traditionally enjoyed. Money placed into the fund in effect becomes a perpetual investment in our future. The principal is inviolable; only the interest from the principal may be used, and that only for the Department of Natural Resource's (DNR) programs directly related to conservation, protection, propagation and distribution of wildlife and the enforcement of fish and wildlife laws.

There are two underlying philosophies to the Endowment Fund. First, we believe that a responsible society has a moral obligation to return to the land which supports it some measure of the gifts that land has provided. We in West Virginia have for years used the material and natural riches found in and beneath our state for our own benefit. The Endowment Fund represents a unique opportunity to make a repayment to nature for our past use, and a pledge to the future to maintain and, if possible, improve our renewable natural resources.

Secondly, The Wildlife Endowment Fund is designed as a partnership between government and the private sector. In truth, without the active support of concerned individuals and corporations, the Endowment Fund cannot succeed. In recent years, we have learned the harsh lesson that government cannot do all things alone. It takes the support of the people if a government program is to be effective. The Wildlife Endowment Fund encourages active public participation in a joint effort to protect something we all need and cherish.

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In a time of shrinking dollars and rising costs, your tax-deductible donations to the Wildlife Endowment Fund provide West Virginia with a mechanism to protect and project a time-honored tradition of sportsmanship and concern for our natural heritage. If you thrill when a

"In a time of shrinking dollars and rising costs, your tax-deductible donations to the Wildlife Endowment Fund provide West Virginia with a mechanism to protect and project a time-honored tradition of sportsmanship and concern for our natural heritage."

ruffed grouse explodes from the cover at your feet, if you find serenity as the early morning sun reveals a trout feeding at your favorite hole, if you gaze in wonder at the tiny eggs in the hummingbird nest next to your home, if you just enjoy tramping through natural areas of the amazing place we call West Virginia, then you have a vested interest in the success of the West Virginia Wildlife Endowment Fund.

Your donation to the fund, or purchase of a lifetime hunting or fishing license can help the West Virginia Wildlife Endowment Fund become the single most powerful resource for the protection and enhancement of *all* wildlife in West Virginia. Should your personal interest dictate, you may specify your donation towards an area of concern; i.e., non-game/endangered species, West Virginia Wildlife Center, hunter education, or acquisition and management of public lands and water.

Direct donations to the Wildlife Endowment Fund are also encouraged. Gifts of liquid assets such as cash, stocks, bonds, insurance policies, etc. are invested immediately in the fund principal to begin earning interest.

The fund can also accept gifts of land. Some property, after Department of Natural Resources review, may be held and used for water access, public hunting and fishing, protection of unique habitat or endangered species, etc. Land not suitable for wildlife use such as commercial or residential property may be donated for its sale—the resulting income being invested in the fund. Wills and estates may list the fund as the recipient of land or liquid assets. Land may be given outright or donated in increments over several years. Land donors can reserve a life estate, where they cede title to the Department of Natural Resources but remain on the property throughout their life. You should contact your attorney or accountant to determine your specific tax benefits on your tax-deductible donation.

Lifetime Licenses

The initial revenue for the fund has been the proceeds from the sale of lifetime hunting and fishing licenses. Four categories of lifetime licenses were approved by the Legislature to fund the Wildlife Endowment Fund. A lifetime fishing license is available for $200, which offers all fishing privileges except for trout fishing. A trout stamp must be obtained separately either as a lifetime stamp for $100 or as an annual stamp.

A lifetime hunting license, $200, offers the same hunting privileges as the regular Class A hunting license. A lifetime hunting *and* fishing license is available for $300, which provides the sportsman with a $100 discount compared to separate purchases of lifetime hunting and lifetime fishing licenses. The purchase of these licenses can save the average resident sportsman more than $500 over his or her license-buying lifetime by protecting that individual from future license fee increases.

Lifetime licenses also make excellent gifts, particularly for youngsters. The license will continue to be valid in the future regardless of changes in residency. For those young sportsmen under two, infant lifetime licenses may be purchased for 50 per cent of the regular cost.

DNR Activities Benefiting

A sampling of Department of Natural Resources activities benefiting from the fund are: wildlife management on over 1.3 million acres on 48 public wildlife management areas and three National Forests; transplant programs involving turkey, deer and geese; reintroduction of the river otter into West Virginia; stocking of muskie, walleye, channel catfish, northern pike, hybrid striped bass, and operation of the West Virginia Wildlife Center at French Creek. The Nongame Wildlife Program coordinates the release of young osprey and peregrine falcons, the protection and management of endangered species, and the publication and sale of the "West Virginia Wildlife Calendar," among many other activities.

Capital improvements include the construction of water access sites, shooting ranges, dams and impoundments, improvements at state fish hatcheries, and support facilities for public hunting and fishing areas.

Law enforcement is critical to sound wildlife management. Without enforcement of regulations, there would be very little wildlife available to the sportsman. The Division of Law Enforcement is primarily responsible for enforcement of all the natural resources laws. Its primary responsibility is the protection of our fish and wildlife resources to the degree that they are not endangered by unlawful activities.

Fund Address

Any individual, company or organization interested in making a tax-deductible donation to the West Virginia Wildlife Endowment Fund, or desiring more information on the programs assisted by the fund should contact Marshall K. Snedegar, Wildlife Endowment Fund Coordinator, Department of Natural Resources, Wildlife Resources Division, State Capitol Complex, Building 3, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305, telephone 348-2771.

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Impaired Physicians Who Are Seeking Help

Peer Assistance, Not Public Identification

As a consultant to the Impaired Physicians Program of the West Virginia State Medical Association, I was deeply concerned and frankly appalled by the actions of the West Virginia State Board of Medicine relative to three area physicians. Specifically, the Board of Medicine apparently issued a press release publicly naming the three physicians and noted they had been given limited privileges to practice medicine ostensively because of their problems with drugs and/or alcohol. The press release then concluded with the mention that the physicians in question were mandated to attend 300 meetings of Alcoholics Anonymous or Narcotics Anonymous in the forthcoming calendar year. This story was carried by all of the local newspapers as well as TV and radio stations.

As a professional involved in the treatment of chemical abuse/dependence, this action on the part of the Board of Medicine disturbs me for several reasons. Specifically:

1. To the best of my knowlege, at least two of the physicans mentioned *voluntarily* entered treatment for substance abuse. They did so as the direct result of their colleagues' concern and not through any mandate of either the Board of Medicine or the West Virgiinia State Medical Association.

   To be publicly identified and chastised for seeking remediation for a treatable health problem seems grossly unfair and runs counter to any thinking I am aware of regarding professional peer assistance programs. The Board of Medicine, in my opinion, has effectively killed any attempts by the West Virginia State Medical Association to organize a viable impaired physicians program.

2. As a licensing agency, the Board of Medicine is charged with protecting the public welfare of health care consumers in the state. To single out a physician who has voluntarily sought help for a treatable illness because that illness involves drug or alcohol misuse is discriminatory to say the least. There is ample evidence to show that such physicians present no greater risk to patient care than a physician treated for any other chronic medical problem.

   Finally, the Board of Medicine is a *licensing* agency. To the best of my knowledge it is not in the business of making clinical recommendations regarding the ongoing care of physicians. As a clinician, I am insistent upon my patient's involvement in anonymous recovery fellowships as part of an individualized program of recovery and after-care. A treatment plan involves numerous other elements as well, especially for a recovering health care professional. To have a licensing board (many of whom are lay individuals) make blanket (and to me, incomplete) clinical recommendations is fraught with danger.

In fairness to the Board of Medicine, I am aware that they are obliged to make their deliberations public pursuant to a Supreme Court decision. However, I feel they could use better judgement within the legal constraints of this mandate and, of equal import, refrain from clinical recommendations.

In the last legislative session the so-called "Impaired Physicians Bill" was introduced by the West Virginia State Medical Association. This bill clearly provided anonymity for physicians voluntarily seeking treatment for a broad range of illnesses including chemical dependencies. It would, if passed, have provided a "cornerstone" for a viable professional peer assistance program for physicians state wide. Unfortunately, this bill seems to have been placed on the "back burner" until future legislative sessions.

The recent actions by the Board of Medicine clearly demonstrate the need for a mechanism for physicians to respond voluntarily to their colleagues' request that they receive help in a nonpunitive way. Until such assurances of confidentiality are provided by law, physicians throughout the state will resist seeking help for a broad range of potentially damaging illnesses. I sincerely hope that the leadership of the West Virginia State Medical Association will do its utmost to assure the passage of the "Impaired Physicians Bill" and thereby truly assure that the public interest is truly protected.

H. Wayne Dickison, M.S., C.A.C.
The Wheeling Clinic
58 16th Street
Wheeling, WV 26003

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Astute business executives already know the value of supporting public and private education. Today, many West Virginia businesses make substantial contributions to our schools and generously fund scholarships for our students. Tomorrow, perhaps every business will have the foresight to fund and support local education.

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President's Page

"During the past several months, members of our Association have been meeting with State Administraton, attempting to draft reasonable and equitable rules with which to implement the Omnibus Health Care Act."

Aftermath

Governmental influences notwithstanding, our society is demanding that drastic change take place within the American health care system. Physician payment reform and expenditure targets are a few of the proposed vehicles for this change. There are mounting concerns that all this is simple rhetoric, paving the way for establishment of a socialistic health care environment.

During the last several months, physicians in West Virginia have been put to the test as never before. No physician in this state can rest comfortably knowing that additional potentially lethal blows will likely be thrown at us in the future.

In the aftermath of Senate Bill 576, known as the Omnibus Health Care Act, it appeared that dissention within the membership of WVSMA would itself begin to unravel the thread that holds together our protective armor—our ability to remain united and organized. It was claimed that our Association lacked credibility and that its leadership was floundering and ineffective. Accurate or not, these perceptions have uncovered an intense concern among our membership that demands immediate and ongoing attention.

During the past several months, members of our Association have been meeting with State Administration, attempting to draft reasonable and equitable rules with which to implement the Omnibus Health Care Act. The final version of the rules are therefore the result of considerable discussion and clarification of both the intent and consequences of the Act. Our continuing involvement with this process is essential if we are to avoid misunderstanding and further confusion.

This next year will bring many changes to WVSMA. After 35 years, we must finally say a loving goodbye to Mary Hamilton, who has postponed her retirement until this month. Efforts to reorganize and futher develop our administrative staff are under way at this time. Guided by new executive leadership, staff are eager to meet the many challenges that will soon be approaching.

The transition in the office of President of our Association has been made smoother by the extremely close and cordial relationship I share with Dr. Bill Atkinson. We and other past officers have all grown from the experience of serving you, and I look forward to meeting the challenges of this coming year.

Most importantly, it rings clear that the strength of our Association truly lies in its members and the cooperative spirit upon which its governing body and elected leaders function. The voice of West Virginia physicians will continue to be heard through its House of Delegates, whose policy-making authority remains unchallenged, and whose collective message is molded by Council into actions the Executive Committee can proudly carry forth.

—Derrick L. Latos, M.D.

The Wildlife Fund

Editor's Note: See Special Article on Page 386.

You will notice something different in the *Journal* this month. A Special Article on a different subject—The Wildlife Fund.

We do not ordinarily print appeals of any sort and we routinely stick rather close to strictly medical subjects. Why then The Wildlife Fund? There are several reasons.

We must first off acknowledge the Journal's debt to the West Virginia Department of Natural Resources for the use of its beautiful color photographs which have monthly graced our cover. The very costly color separations needed to print these and many issues to come have been given to us at no cost by the Department. But this is not the most important reason for the article.

We do live in a gorgeous state and, as the article suggests, we have some obligation to pass on whatever part of that beauty that can be salvaged for future generations. The DNR is one agency doing that for us. Doctors in different corners of this state can without doubt attest to the results of DNR programs evident in their area. We can enthusiastically acclaim what we see happening in our northern corner.

West Virginia doctors like to hunt and fish. For many, particularly in our rural counties, that is the principal reason they came to West Virginia to start with. It occurs to us that in our present political climate and with our present political leadership there are few other attractions to entice young physicians here. We had best get busy polishing up our assets; the politicians are doing all they need to do to highlight our liabilities.

Our principal reason for publishing The Wildlife Fund is that we admire not only what they are doing but, even more, how they are doing it. How did they ever figure out a way to keep a working fund of money out of the hands of the politicians? Anyone who has ever examined the workings and the failings of government has come to the conclusion that the only way to keep politicians from blowing money foolishly or from using it strictly on self-serving purposes is to keep the money out of their hands to start with. DNR found a way to keep politicians from feeding at its trough. We congratulate them and bless them for it.

We should be so smart as to keep the Governor and his minions out of health care. We have failed at this thus far and the government camel has his nose, head and most of his first hump in our tent already. Maybe with a few lessons from the DNR we could learn to drive that alien beast out of our tent and all the way out of the state.

The West Virginia Department of Natural Resources through its example can help us enjoy hunting our state's wild animals or its untamed politicians. Contribute to The Wildlife Fund!—SDW

Patients and Prescriptions

If you could improve your family's health by talking wouldn't you speak up? According to the National Council on Patient Information and Education (NCPIE), better communication about prescription medicines can improve health outcomes for all kinds of illnesses. Yet millions of American families don't talk about their prescriptions with each other or their health professionals.

As a result, they don't have the information they need to take or give medicines correctly. Instead of getting better, family members of all ages may fail to control chronic disease, and suffer continued symptoms and secondary complications.

To help families use medicines properly, NCPIE (a 250-member, Washington, DC-based coalition of health professional societies, consumer organizations, government agencies, voluntary health organizations, and private companies) is sponsoring the 4th Annual "Talk About Prescriptions" Month in October, 1989. The theme, "Speak Up America: Talk About Prescriptions," highlights how better medicine communication contributes to better family health.

NCPIE has developed a 20-page, tabloid-size planning guide to help organizations and individual health professionals participate in "Talk About Prescriptions" Month. This year's planning guide highlights the special medication information needs of American families, the young, old and in-between. It contains articles, reproducible patient and health care professional handouts including a special handout for low-reading-level patients, a poster, ideas for community activities and a three-page resource list.

You can obtain a copy of the 1989 "Talk About Prescriptions" Month planning guide by contacting NCPIE. Single copies are 50 cents. For information on quantity discounts call NCPIE at (202) 347-6711.

Guest Editorial by National Council on Patient Information and Education.

Family Physician CME, Sports Medicine Conference

A faculty of 24 including 17 guests will conduct the third annual Family Practice Weekend and Sports Medicine Conference sponsored by state family physicians in November.

The weekend CME/sports medicine program is scheduled in Huntington, November 17-19, at the Radisson Hotel by the West Virginia Chapter, American Academy of Family Physicians.

Main areas of discussion will include lipids, cholesterol, congestive heart failure, glucotoxicity, anxiety, sinusitis, depression, ulcers, growth disorders, antiinflammatory drug-induced gastropathy, and sports medicine.

Co-sponsors are the Family Medicine Foundation of West Virginia, Marshall University Department of Family Practice and Community Health, and the MU Division of Sports Medicine.

Special Attractions

Special attractions will include an appearance by the American miler, Jim Ryun, Friday afternoon, November 17, and a concert by The Platters and the Full Tilt Band Friday evening at the Huntington Civic Center.

Ryun will meet with students as a guest lecturer, discuss running and racing with Marshall athletes, present the "Jim Ryun Story—Allergy in Competitive Athlete" at 3:30 P.M. at the Radisson, and sign autographs and meet the public at 4:30 P.M.

Guest Faculty

Guest faculty members in addition to Ryun are Robert Barton, Head Trainer, Eastern Kentucky University, Richmond, Kentucky, and Drs. David Bienenfeld, Assistant Professor of Psychiatry, University of Cincinnati; J. Raymond DePaulo, Jr., Director of Education and Behavioral Sciences, Johns Hopkins University; Barry Effron, Department of Medicine, University Hospital of Cleveland (Ohio);

John Kastor, Department of Medicine, University of Maryland Hospital; Susan L. Koletar, Assistant Professor of Medicine, Ohio State

Stanley

Rooklin

University; Derek LeRoith, Chief: Section on Molecular and Cellular Physiology, Diabetes Branch, National Institutes of Health; Michael Levin, Johns Hopkins Hospital; Eugene S. May, Columbus, Ohio; Gerald McGowan, Sioux City, Iowa;

Mark W. Parker, Charlotte, North Carolina; Wayne Peters, Englewood, Colorado; Douglas K. Rex, Indianapolis, Indiana; Anthony Rooklin, Chester, Pennsylvania, and Keith Stanley, Tulsa, Oklahoma.

Program chairmen are Drs. James M. Kyle, M.D., Medical Director, Department of Sports Medicine, St. Joseph's Hospital, Parkersburg; and Jose I. Ricard, Huntington, Chairman of the Board, West Virginia AAFP.

This program is approved for 15.45 AAFP prescribed hours and by the American Medical Association for 15.45 hours toward the Physicians Recognition Award in Continuing education. AOA credit towards category 2-D for 15.45 hours is also approved.

Correction

The words in brackets—[The Wheeling Clinic]—should not have been inserted in the fifth and sixth lines of the letter, "Master Clinician," by Byron L. Van Pelt, M.D., in the August, 1989, issue of the *Journal* (Page 344). Without the bracketed words following the word, "institution," the sentence should have read, "While reflecting during my annual retreat to Johns Hopkins to further my medical education, I could not help but think of the many great physicians this institution has produced."

In addition, The Wheeling Clinic and addresse should not have been placed under Doctor Van Pelt's name at the end of the letter.

The *Journal* regrets this error.

Teen Health, Immunology Update,

Adolescent health, immunology update and the aging process will be main areas of discussion for the 23rd Mid-Winter Clinical Conference next January 26-28 in Charleston at the Holiday Inn Charleston House.

A reception for members of the West Virginia Legislature is being planned for 6-7 P.M. Thursday evening, January 25, preceding the opening of the conference.

Speakers for the opening Friday afternoon session will cover health maintenance (weight, smoking, blood pressure, diet, cholesterol), eating disorders, drugs/alcohol, and sexually transmitted diseases in West Virginia.

Subjects for the Saturday afternoon immunology session will include childhood and adult immunizations, desensitization, drug therapy, and tests (ANA, SED rate, ect.)

Normal physiology of Aging will be the first talk for the aging session Sunday morning, with other papers to cover pharmacology, nutrition and injuries: treatment of falls.

WVSMA Policies

Travel and Reimbursement

Editor's Note: The WVSMA Executive Committee and Council announced last January that Association travel and reimbursement policies would be revised and published in the Journal when finalized. They are presented below.

The following codifies WVSMA travel policies as they have evolved or developed or been authorized over past years. Requests for reimbursement must be submitted by filing an expense voucher within sixty (60) days of incurring the expense. Excepting mileage, any expense exceeding $25 (twenty-five) requires a receipt.

TRAVEL/TICKET/MILEAGE REIMBURSEMENT:

1.0 WVSMA will reimburse the authorized traveler (officer, speaker, member or staff) at the lesser of either coach class airfare (maxi-saver rates when and where applicable) or at the rate of $.24/mile for use of personal automobile to and from the point of departure by the most direct route.

1.1 WVSMA-leased vehicle(s): The mileage reimbursement for WVSMA-leased vehicles shall be $.15/mile for official travel.

1.2 The traveler will be reimbursed usual and necessary ground transportation while attending authorized meetings.

1.3 Travel will be reimbursed for official WVSMA meeting, including those of the Council and Executive Committees, Task Forces, and special meetings of the House of Delegates.

HOTEL COSTS:

2.0 WVSMA will reimburse for appropriate hotel room charges and applicable taxes at the single occupancy rate in the hotel of the meeting location or other nearby facility, but not at a rate greater than the conference or scheduled rate of the host hotel. It shall be the policy of WVSMA to reimburse for an extra night's hotel cost when staying over an additional night results in an airfare cost less than the cost of the extra hotel room night. Under such circumstances, the extra hotel cost is justified when it and the extra meals do not exceed the airfare cost.

2.1 TIPS/Miscellaneous Cost. WVSMA will reimburse for reasonable tips and other miscellaneous costs incurred with authorized travel, including one personal telephone call per day while away on official business.

MEALS/REGISTRATION;

3.0 Meal costs will be reimbursed at cost subject to a $50 per day maximum. Exceptions require specific documentation.

3.1 WVSMA will reimburse for all reasonable and necessary registration fees incurred in the conduct of authorized travel to and from meetings away from home.

AMA MEETING TRAVEL:

4.0 AMA Meeting Reimbursement: Due to the fact that AMA delegates, alternates, officers and staff are required to be away from home for the greater part of a week at a time and because spouses are an asset at the meeting in furthering the relationships with other state delegations and the AMA Auxiliary, WVSMA will reimburse at the medium rate for a double room for authorized travelers taking a spouse along.

WVWMA will obtain a small suite at such meeting to provide a meeting place for the West Virginia delegation and caucuses. The suite shall be registered in the name of the WVSMA President who will occupy it. If a two-bedroom suite is available and obtained, the other bedroom may be occupied by any other member of the delegation as shall be determined by common agreement.

4.1 WVSMA will reimburse the cost of round trip coach or super-saver airfare for the authorized traveler. The spouses of the President and Executive Director are authorized to have their travel and meal expenses reimbursed by WVSMA. All other sopuse costs shall be the responsibility of the authorized traveler to the meeting.

4.2 Authorized AMA meeting travelers will be allotted $50/day for food costs until such time as the WVSMA Council shall authorize an increase in this flat amount. WVSMA will cover the cost of a group dinner for those attending both the annual and interim meetings of the AMA.

4.3 Authorized to attend the Annual and Interim Meetings of the AMA are: 3 Delegates, 3 Alternate Delegates, President, President-Elect, Vice President, Council Chairman, Young Physicians Section Delegate and Alternate, Executive Director and the spouses of the President and Executive Director. Others (in

Aging Among 'Mid-Winter' Topics

A potpourri of topics will be offered during the Saturday morning session: contemporary treatment of congestive heart failure, laser overview, chest x-rays, mammography, and asbestosis.

Plans are incomplete for the traditional Friday evening Physicians' Session. Poisons and toxic threats in the home environment will be discussed at the concurrent Public Session.

Members of the Progam Committee are Drs. William O. McMillan, Jr., Chairman, Charleston; James L. Comerci, Wheeling; Gerald T. Golden, Martinsburg; George W. Hogshead, Nitro; Maurice A. Mufson, Huntington; Joseph T. Skaggs, Charleston; Richard G. Starr, Beckley; John W. Traubert, Morgantown, and C. Carl Tully, South Charleston.

Ex officio members are Ernest W. Chick, M.D., Marshall University CME; Sharon A. Hall, Charleston Area Medical Center CE, and Pat Penn, West Virginia University CME.

Speakers and additional program information will appear in upcoming issues of the *Journal.*

cluding staff and/or legal counsel) may be authorized for a specific AMA meeting or any part thereof by action of the WVSMA Executive Committee.

WVSMA ANNUAL MEETING:

5.0 WVSMA assumes all travel and lodging costs incurred for WVSMA staff attending the WVSMA Annual Meeting and, in recognition of the extra time, effort and inconvenience involved with this meeting, WVSMA has authorized the staff members' spouses to join them for the Friday and Saturday portions of the meeting at WVSMA expense. Inasmuch as staff rooms are traditionally complimentary due to the number of rooms occupied by the meeting, the cost to the WVSMA is a minimal amount to cover the additional food costs for the extra occupant of the room.

5.1 WVSMA Executive Committee members shall receive a stipend of $100 toward the cost of the extra night's hotel room in conjunction with the WVSMA Annual Meeting at the Greenbrier when required to attend an Executive Committee meeting on Tuesday night before the traditional Wednesday Council meeting.

5.2 Council members shall be reimbursed mileage expense for attendance at all Council meetings including the one held in conjunction with the WVSMA Annual Meeting, but shall receive no room reimbursement unless otherwise qualifying for same by virture of office held or being an official program speaker. Council members shall be exempt from the usual annual meeting registration fee, however.

5.3 The WVSMA President traditionally recives a complimenatry two-bedroom suite with parlor at the Greenbrier to house self and spouse/family. Additional rooms needed for family, relatives or friends are at the President's personal expense. WVSMA covers the cost of food, lodging and required entertainment (AMA President, guest visiting presidents, etc.) for the Annual Meeting, but other expenses for recreation, etc. are regarded as personal expense.

Identifying Hearing Problems Earlier In Children U.S. Goal by Year 2000

Hearing impaired children are not identified in the United States until an average age of two and one half years, according to former Surgeon General C. Everett Koop, M.D.

"By contrast, the average age of identification in Israel and Great Britain is seven to nine months," Doctor Koop said in an appeal to physicians and the general public to recognize this problem before he recently left office.

"Clearly, we can, and must, do a better job of identifying hearing impaired children at an early age. Why is early identification of hearing impaired children so important? Because if not detected early, hearing impairment interferes dramatically with language development which occurs primarily within the first few months of life.

"Fortunately, the negative consequences of childhood hearing impairment can be substantially ameliorated if they are discovered early and approprite assistance is given. That is why I have set a goal that by the year 2000, 90 per cent of all children with significant hearing impairments will be identified by 12 months of age. That is an ambitious goal, and each of us will need to work together if we are to accomplish it."

Parents and the general public who need help regarding infants' hearing may call the Infant and Child Health Hotline at 1-800-922-9234.

SMA Appointments

Charleston otolaryngologist Romeo Y. Lim, M.D., has been appointed to a two-year term on a special Education Subcommittee of the Southern Medical Association. He specializes in head and neck cancer surgery, endoscopy, reconstructive surgery and laser surgery.

"Mr. Mundello . . . when I said 'Strip to the Waist', I meant for you to start at the top."

Poetry Corner

Reprieve

You have cancer of the right kidney you are told,
And from here on you have to be bold,
Radical cancer surgery you will need,
You have to be strong indeed.

There is an unexpected complication,
A mass in your pancreas I have a notion
Is not malignant but is benign,
And that you will be fine.

The nine-hour surgery you survive,
And your slim hopes to live longer revive,
True, they remove a lot of your abdominal organs,
But the fact is that you remain alive.

It has been almost two years since that nightmare,
But every day you are keenly aware,
That life is so tenuous and fleeting and done,
Anytime, anytime you may be gone.

Orlando I. Agnir, M.D.
Martinsburg

Child of God

Fair is the damsel,
Flaxen is her hair,
Haxel are her pretty eyes
Undimmed by human care.

Rosey are her dimpled cheeks,
Bewitching is her smile,
Happy is her carefree laugh;
This charming little child.

She walks with graceful, buoyant step
And runs with equal ease;
She knows of no confining walls,
But wanders where she please.

And none would know this little girl,
This carefree girl, and kind,
Is not a normal little girl;
Although this child is blind.

For God has given just to her
A special kind of sight;
His love protects and keeps her,
She's guided by His light.

E. Leon Linger, M.D.
Buckhannon

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

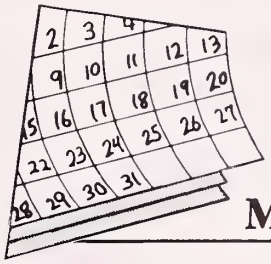
ENT Southern Section to Meet in State

The Southern Section of the American Laryngological, Rhinological and Otological Society, Inc.—The Triological Society, will meet January 11-13, 1990, in White Sulphur Springs at the Greenbrier.

James T. Spencer, Jr., M.D., of Charleston is Section Vice President and Chairman for the three-day meeting.

M. Stuart Strong, M.D., of Weston, Massachusetts, is the national President. It is customary for the four sections of the Society to meet in January with the attendance of the national President, beginning with the Western Section the first weekend in January, followed by the Southern Section, the Middle Section, and finally the Eastern Section on the fourth weekend.

Attendance at the scientific meetings is open to all physicians by registration. Interested physicians should direct inquiries to Ann Holm, Meeting Administration, 2954 Dorman Road, Broomall, Pennsylvania 19008.



Medical Meetings

September

2-3—Philippine Medical Assoc. of WV, Charleston.
6—WVSMA/CNA Loss Control Seminar, Parkersburg.
11-14—Am. College of Emergency Physicians, Washington, D.C.
18-21—Am. Academy of Family Physicians, Los Angeles.
21-23—Am. Academy of Facial Plastic & Reconstructive Surgery, New Orleans.
21-23—Am. College of Nuclear Medicine, Chicago.
24-27—Am. Neurological Assoc., New Orleans.

October

4-5—National Political Education Conference, Washington, D.C.
5-6—Am. Academy of Pediatrics, Atlanta.
15-20—Am. College of Surgeons, Atlanta.
18-21—Am. Academy of Clinical Psychiatrists, St. Louis.
19-21—Hal Wanger Family Practice Conference, Morgantown.
19-22—Am. Society of Internal Medicine, Washington, D.C.
20-21—Office Managers Assoc. of Health Care Providers, Beckley.
20—Highland Hospital William B. Rossman Symposium, Charleston.
30-Nov. 3—Am. College of Chest Physicians, Boston.

November

3-4—Am. Academy of Pain Medicine, Dallas.
4—Eye & Ear Laser Surgery Seminar VI, Eye & Ear Clinic of Charleston, Inc. Charleston.
4—AMPAC Candidates Workshop, St. Louis.
5-8—Southern Medical Assoc., Washington, D.C.
12-17—AMPAC Campaign Management School, Washington, D.C.
17-19—WV Chapter, Am. Academy of Family Physicians 3rd Annual Family Practice Weekend & Sports Medicine Conference, Huntington.

December

3-6—AMA Interim Meeting, Honolulu.

1990

January

11-13—Southern Section, Am. Laryngological, Rhinological & Otological Society, Inc., White Sulphur Springs.
26-28—WVSMA 23rd Mid-Winter Clinical Conference, Charleston.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Judith A. Bradle, Program Manager, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Bradle, (304) 347-1363; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Sept. 2, Common Pain Problems for the Practicing Physician*

Sept. 16-17, Anesthesia Update '89*

Sept. 22-23, Tenth Annual Ophthalmology Conference

Sept. 29-30, E. B. Flink Internal Medicine Conference*

Oct. 5-7, Pediatrics Oktoberfest

Oct. 6-7, Gearing Up for Senior Care in the Year 2000*

Oct. 19-21, 15th Annual Hal Wanger Family Medicine Conference*

Nov. 11, Women's Health Issues*

Nov. 17-19, Hypnosis Workshop

*In conjunction with WVU football games

CME Outreach Programs

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★ WVU Health Sciences Center, Morgantown

☐ WVU Health Sciences Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Brownsville, PA, ★ General Hospital, 11 A.M.—Sept. (no program)

Cabin Creek, ☐ Cabin Creek Medical Center, 8:30 A.M.—Sept. 14, Health Maintenance of Incontinence in Geriatrics, Shawn Chillag, M.D.

Fairmont, ★ Fairmont Clinic, Noon—Sept. (no program)

Fairmont, ★ General Hospital, 7:30 A.M.—Sept (no program)

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Sept. 6, Fracture Management, Peter J. Lukowski, M.D.

Hurricane, • Putnam General Hospital, 7 P.M.—Sept. 27, New Management of Prostate Cancer, Sam Oliver, M.D.

Logan, • Logan General Hospital, 11:30 A.M.—Fibrocystic Disease, G. Cendana, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Sept 12, Signs & Symptoms of Abuse of Prescription & Street Drugs, Veena K. Bhanot, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Sept. 19, Update on Skin Cancers, Donald Farmer, M.D.

Martinsburg, ★ V.A. Medical Center, 3 P.M.—Sept. (no program)

Montgomery, • General Hospital, 12 P.M.—Sept. 6, Trauma Update, James Kessel, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Sept. (no program)

Parkersburg, ★ Camden-Clark Hospital 7 A.M.—Sept. (no program)

Petersburg, ★ Grant Co. Memorial Hospital, Noon—Common Dermatologic Disorders, William Welton, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Sept. 8, New Management of Prostate Cancer, Sam Oliver, M.D.

South Williamson, • Appalachian Regional Hospital, 5:30 P.M. (tba)

Spencer, • Roane General Hospital, 12:30 P.M.—Sept. 19, Diabetic Retinopathy, Mark Hatfield, M.D.

Summersville, ☐ Summersville Memorial Hospital, 6:30 P.M.—Sept. 5, Approach to the Child With Encephalitis, James McJunkin, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 A.M.—Sept. (no program)

Weston, ★ Stonewall Jackson Hospital, 6:30 P.M.—Sept. (no program)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Sept 27, Fracture Management, Peter J. Lukowski, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic, 4 P.M.—Sept. 19, Cancer, Steven Jubelirer, M.D.

Williamson, ☐ Williamson Memorial Hospital, 6:30 P.M.—Sept. 21 (tba)

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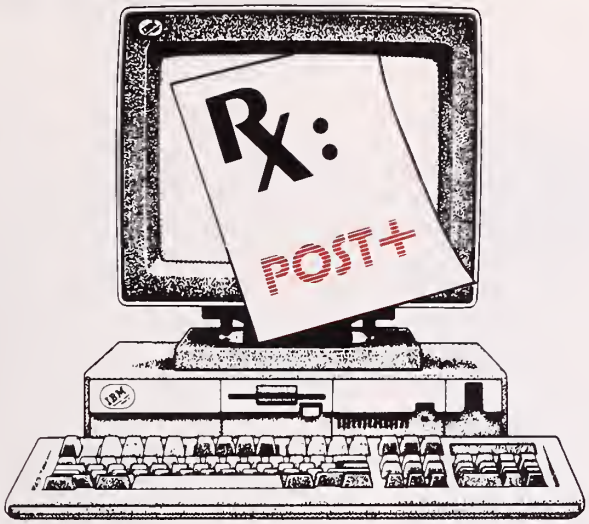

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Butcher Director of Cancer Center

Fred R. Butcher has been named Director of the Mary Babb Randolph Cancer Center at WVU.

Doctor Butcher, a biochemist, had been serving as Interim Director of the Cancer Center as well as Associate Dean for Research in the School of Medicine.

The Randolph Cancer Center is West Virginia's only comprehensive center devoted to cancer treatment, education and research.

Butcher was selected for the post after an extensive national search. In announcing his appointment, WVU President Neil Bucklew said, "No one has been more deeply involved in the creation of the Cancer Center than Doctor Butcher. He has worked to shape the Cancer Center and its programs to meet the specific needs of West Virgnia and the surrounding regions.

'Compassionate Leadership'

"He has already demonstrated that he can provide the energetic, articulate and compassionate leadership the Center will require if it is truly to serve as West Virginia's Cancer Center. We are delighted that he has agreed to take on the challenge of being the Cancer Center's first Director."

The Cancer Center has been a functional entity for several years, but its components have been scattered around the Health Sciences Center. Construction of the Center's $15 million facility on the WVU Health Sciences campus will be completed this fall, permitting the medical staff of the Cancer Center to be gathered and expanded, new outreach projects to be launched, and new research laboratories and treatment facilities to be opened.

The Cancer Center has been built almost entirely with federal funds secured largely through the efforts of U. S. Senator Robert Byrd. The

"West Virginia's Cancer Center was created for one fundamental purpose—to save lives."—Fred R. Butcher, Ph.D., Director

Cancer Center is part of the WVU School of Medicine, though faculty from many other departments of the University will work with the Center, particularly in its research programs.

Robert D'Alessandri, M.D., Dean of the School of Medicine, said Butcher had demonstrated his capabilities as the School's Associate Dean for Research.

"Thanks in great measure to Doctor Butcher's leadership, research in the School of Medicine has tripled in recent years and there has been a decisive advance in overall quality and sophistication. This invigoration of the biomedical research community at WVU is impressive evidence of Doctor Butcher's effectiveness."

Butcher, 45, was born in Rochester, Pennsylvania. He earned his bachelor's and Ph.D. degrees from Ohio State University. Following two years of postdoctoral research at the University of Wisconsin's McArdle Laboratory, an internationally recognized center for basic cancer research, Butcher began his academic career at Brown University in 1971.

Most of Butcher's research has focused on mechanisms by which cells in the body respond to and transmit chemical signals. Errors in the transmission of chemical signals can contribute to the development of cancer, and Butcher's research has shed light on the fundamental nature or cancer cells.

Butcher joined WVU in 1978 as Professor of Biochemistry, was appointed Chair of Biochemistry in 1981, and Interim Director in May, 1988.

"West Virginia's Cancer Center was created for one fundamental purpose—to save lives. We intend to leave no stone unturned in pursuit of that end, and we will cooperate with anyone who shares our goals," Butcher said.

He said cancer in the Appalachian region represents both a health problem and a social problem.

"Cancer takes a disproportionate toll on the economically disadvantaged. In West Virginia it's not going to be enough to make excellent new treatment facilities available. We have to actively go out into the state and work with communities to overcome the social and economic obstacles that prevent people from having their cancers diagnosed early enough for effective treatment.

12 Cancer Deaths Daily

"We have to make sure people understand that healthy lifestyles—proper nutrition, not smoking—can save them from getting cancer in the first place..."

Butcher noted that an average of 12 West Virginians die of cancer every day, and about twice that number are diagnosed as having cancer. West Virginia leads the nation in the percentage of women dying of cervical cancer, and for some other types of cancer the state is well above national averages.

"The problems we face are enormous, but I am confident we can work together to make significant, long-term progress against cancer in this state," Butcher said.

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MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

House Calls: Cycling in Again?

Republished courtesy of the Charleston Daily Mail

In what could be called a combination of old ideas and modern needs, the Marshall University School of Medicine's family practice residency program has gone back to the age-old practice of making house calls on patients.

However, the move to send doctors back to patient homes is anything but an old-fashioned gesture in the modern world. Supporters of the program say house calls are once again becoming necessary, especially in West Virginia.

With a higher percentage of elderly people living in the state, the number of chronically ill and homebound people has increased. And access to qualified professionals and services has grown increasingly difficult. There are fewer rural hospitals, fewer rural doctors and nurses and shortages of nursing home beds.

Mutually Helpful

The answer? If the patient can no longer get to the doctor, send the doctor to the patient.

"You know some patients just can't come in for visits and it's a great inconvenience to them," said Dr. Bob Walker, Chairman of the Family Practice Department at Marshall. "In these cases, you know the patient and you know the patient's needs and can schedule regular visits to their homes.

"It's been very successful because now the patients don't have to pay for an ambulance to bring them in for a regular office visit. It also saves them from the fear of being paraded around in public."

From the health care standpoint, the house call allows a doctor to view the patient in his or her home environment, Walker said. A doctor can make sure the patient lives in a safe, sanitary environment with the needed supplies.

Plus, patients seem to like the personal treatment they receive at home, he said.

The demographics among doctors have changed in recent years, with more physicians practicing in the cities and fewer in rural areas. With this in mind, Walker said he thinks the overflowing number of urban family doctors may have the time and the incentives to go out to rural areas and make house calls.

Furthermore, the essential goal of family practice—getting to know the patients' problems—remains the same, even in the age of high technology.

"We may have gone too far with high technology," Walker said. "We may have sacrificed too much (patient contact) and this way we're getting a better idea of a patient's environment and lifestyle."

Walker stressed that the house calls can only be made for patients with chronic, but not acute, illnesses.

When a patient has a serious medical problem, house calls are improper and often useless because the patient may need tests or the types of care available only in a health care institution.

Frequently, the house call supplements the work of home health nurses, who work with home-bound patients on a more regular basis, Walker said.

"I don't want to underestimate the home health nurse," he said. "They're doing a great job and they do a lot for these types of patients. The doctors make occasional (check-up) visits. The nurses are more regular."

About 20 residents take part in Marshall's family practice program. Most of them make between one and four house calls a month. The program has been incorporating the house calls into its curriculum over the last three years.

Alumni Weekend September 9-10

The School of Medicine's third annual Alumni Weekend, September 9-10, will feature the unveiling of a portrait of long-time Dean Robert W. Coon, M.D., concurrent grand rounds, and CME activities whose speakers include Marshall graduates and faculty from both WVU and Marshall.

The weekend also provides ample opportunities for mingling. All events except the tailgate party and football game will be at Huntington's Radisson Hotel.

A cocktail reception Friday for alumni and faculty will kick off the weekend. Grand rounds will be held concurrently Saturday morning by Family and Community Health, Internal Medicine, Surgery, and the basic sciences departments.

Doctor Coon's portrait, which will hang in the Robert W. Coon Medical Education Building, will be unveiled at the noon luncheon. William Neal, M.D., Professor and Chairman of Pediatrics at WVU, will be the luncheon speaker.

The three-hour CME presentation beginning at 1:30 P.M. will focus on pediatrics, with talks on neonatal intensive care and practical pediatric cardiology for the practicing physician. Additional talks will provide an update on vaccines and a description of Marshall's international health program. Physicians who attend both this program and the morning grand rounds are eligible for four hours of CME credit.

The event will conclude with a tailgate party from 5 to 7 P.M. at Prindle Field and the 7 P.M. football game between Marshall and Morehead State University.

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New Members

The following members were welcomed in July as new members of the West Virginia State Medical Association

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Donald Price, M.D.
2000 Professional Court
Martinsburg, WV 25401

Hancock

John Cherian, M.D.
485 Colliers Way
Weirton, WV 26062

Kanawha

Kevin C. Dupke, M.D.
400 Division Street, Suite No. 2
South Charleston, WV 25309

Albert F. Heck, M.D.
3508 Staunton Ave., S.E.
Charleston, WV 25304

Monongalia

Geoffrey M. Graeber, M.D.
WVU Medical Center
Department of Surgery
Morgantown, WV 26506

Eugene R. McDannald, M.D
WVU Medical Center
Department of Surgery
Morgantown, WV 26506

Eugene Jay Owens, M.D.
WVU Medical Center
Department of OB/GYN
Morgantown, WV 26506

Residents

Gregory Ganzer, M.D.
112 Wedgewood Drive, Apt. 11
Morgantown, WV 26505

Meijanti Witarsa, M.D.
Route 12, Box 305-B
Morgantown, WV 26505

James C. Yuen, M.D.
101 Cedarstone Drive
Morgantown, WV 26505

Student

Charles David Reed
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R. N. Lewis, M. D. (St. Clairsville)
R. D. Morris, D. O. (New Martinsville)
C. McCool, M. D. (St. Clairsville)
T. Gary Kenamond, M. D.

Peripheral Vascular Disease
J. D. Holloway, M. D.

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A. M. Valentine, M. D.
W. E. Noble. M. D.

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R. S. Glass, M. D.
J. Melia, M. D.

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D. C. Trapp, M. D.
B. M. McCuskey, M. D.

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R. W. Lebold, M. D.

OBSTETRICS & GYNECOLOGY
T. A. Atharl, M. D.
J. W. Campbell, M. D.
C. V. Porter, M. D.

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M. E. Nugent, M. D.
R. V. Pangillnan, M. D.
D. Simbra, M. D.
Kathryn M. Clark, O. D.

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A. G. Matadar, M. D.

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E. L. Coffield. M. D. (Martinsville)
G. E. Sella, M. D. (Colerain)
W. G. Bell, M. D. (Wellsburg)

PODIATRY
B. Blank, D.P.M.

DERMATOLOGY
M. Baron, M. D.

NEUROLOGY
H. L. Kettler, M. D.
W. Zyznewsky, M. D.
S. Govindan, M. D.

Neuropathology
S. Govindan, M. D.

Pediatric Neurology
Rajav R. Varma, M. D. (consultant)

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WESPAC Members

Listed below are additional 1989 WESPAC members reported to the *Journal* since those published in the August issue. New WESPAC members will be reported next month.

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Ron D. Stollings

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*James A. Cochrane
*Kyle R. Hegg
**Richard E. McWhorter
Bruce A. Ratcliff
*Hossein Sakhai
*Charles E. Turner

Central
*Earl L. Fisher
John A. Mathias
Frank A. Scattaregia
*Ralph A. Stalnaker

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David Abramowitz
Richard A. Capito
Jacques Charbonniez
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Michael O. Fidler
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James P. Hall
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Marianne Lindroth
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Rajendra P. Bellam

Marshall
**Mohammad F. Anwar

Mason
*John A. Wade, Jr.

Mercer
*Saroj Agarwal
John E. Van Gilder

Mingo
Rao H. Vempaty

Monongalia
*David Z. Morgan
Justus C. Pickett
Charles D. Pruett

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ARMY RESERVE MEDICAL PROFILE NO. 5

ROSALYN P. STERLING-SCOTT, M.D.

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

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FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.
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- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme (rarely, Stevens-Johnson syndrome) and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology:
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
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- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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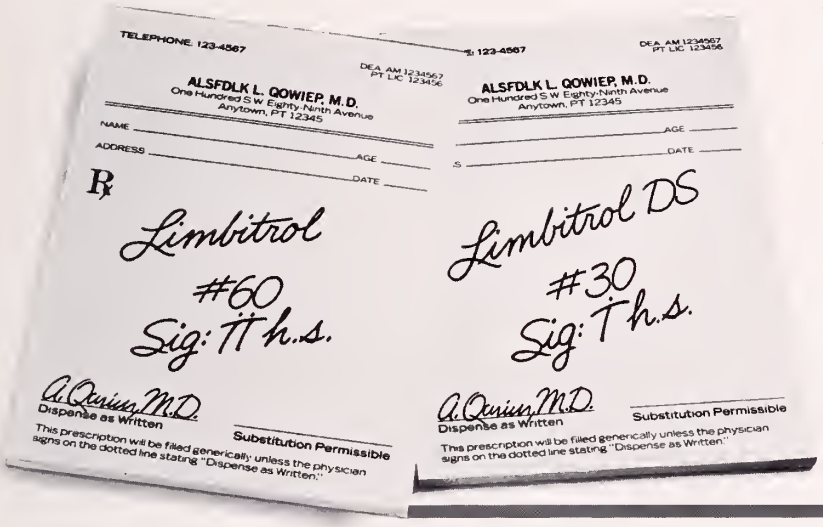

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

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Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

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Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

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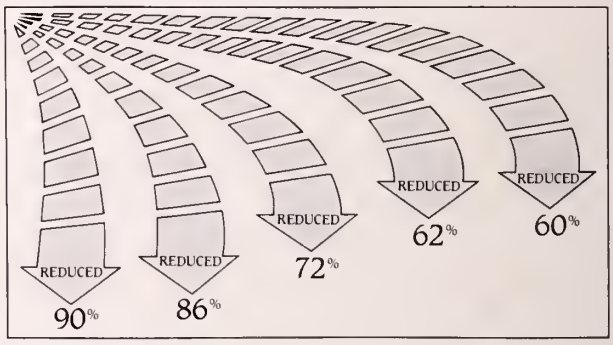

*Patients often presented with more than one somatic symptom.

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A New Experience
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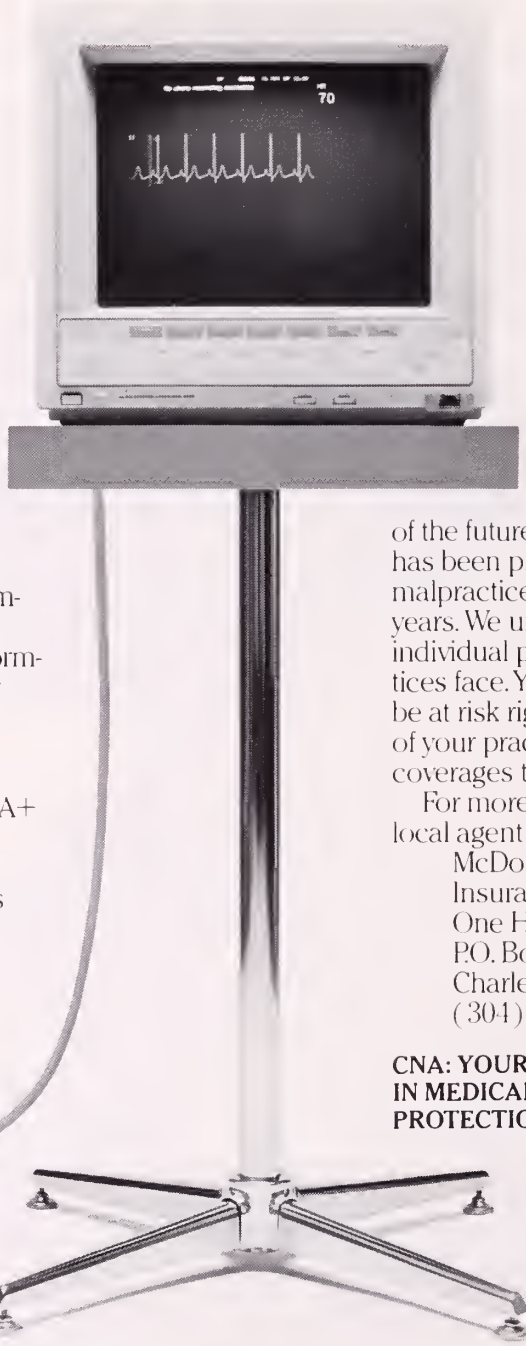

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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USPS 676 740
ISSN 0043 - 3284

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*Presidential Address**

New Strategies, Timely Communications Planned

New WVSMA President Derrick L. Latos, M.D., of Wheeling (left) is administered the oath of office by Bill M. Atkinson, M.D., Parkersburg, 1988-89 President, during the final session of the House of Delegates August 19 at the Association's Annual Meeting in White Sulphur Springs at the Greenbrier.

DERRICK L. LATOS, M.D.
Wheeling, President,
West Virginia State Medical Association

Standing before you today makes me feel much like David must have felt as he rose to say to the Israelites, "Let me be the one to meet the mighty Goliath!" The Goliath that we face together today is as much a giant as the one that succumbed to David's well-aimed stone.

However, we are not even sure how to identify our adversary. Is it disease that we seek to cure? Is it the physical pain that accompanies a tragic accident? Is it the emotional pain suffered by a family who loses a loved one, or is our giant simply the frustration of not having sufficient staff nor medicine to treat those who would benefit from our labors? Some would say that our greatest foe is that which is attempting to separate us from our patients . . . namely, the changing climate of our society that is causing a *revolution* in Medicine. Our giant is likely all of these and more!

"It appears that there is now more emphasis on health care delivery than on health care."

**Presented at the second and final session of the House of Delegates, 122nd Annual Meeting of the West Virginia State Medical Association, White Sulphur Springs, West Virginia, August 19, 1989.*

No matter how effective our antibiotics become, the mighty microbes learn to adapt and become resistant. New diseases such as Lyme Disease and the ever expanding spectrum of illness caused by the AIDS virus present major diagnostic and therapeutic challenges. Even our attempts to treat and cure sickness may cause further suffering. Mishaps related to invasive procedures and drug-induced clinical syndromes are no stranger to any clinician.

Right or Privilege?

At a time when technical breakthroughs are everyday occurrences, we must, however, face the reality that many people in our state and throughout our nation do not receive adequate health care. For some the reason is a simple unavailability of physicians and health care facilities. Many others cannot afford to pay for either their health care directly or for their insurance premiums. Some are not even eligible to receive health insurance.

Growing dissatisfaction with the rising costs of medical care and the health care industry's inability to keep pace with the expansion of social expectations has led to this revolution in medicine, a revolution that has created an entirely new group of Philistine giants for us to battle. The debate continues unanswered: Is health care a right or is it a privilege?

Even the language of health care has shifted tremendously. Instead of using phrases describing various maladies such as "the croup," "cerebrospinal fever," "infantile paralysis," and others, we are now under constant barrage by an endless array of administrative jargon: HMO, PPO, managed care, precertification, length of stay, expenditure targets. . . It appears that there is now more emphasis on health care delivery than on health care.

The challenge that we as physicians must face today, and every day from now through the beginning of the next century, is to realize that transition and change within our profession are necessary if we are to meet the needs of our changing society and environment. We must not fear, but welcome, this change. We must ourselves create this change lest it be created for us.

Healthier Lifestyles

Just as we must learn to use newer drugs and technologies for the benefit of our patients, we must learn to develop better ways of dealing with the illnesses from which our patients suffer. We must find new ways to encourage our patients to live healthier lifestyles so they will not need to depend so strongly on treatment of diseases. We must find better ways to show our children that the use of drugs and alcohol is not a prerequisite for social acceptability, and that the reality of raising children is equally as important as being able to produce them.

"Brief videotaped presentations will be regularly distributed to each component society. The intent is to carry a more personalized message from our Executive Committee about major items of importance."

It is now obvious that our ability to interact with the state Legislature must be strengthened. This effort must start with each of us at the local level in discussions with our elected representatives and also with our patients concerning the specific issues that we feel are important. This effort must continue through organized channels such as WESPAC and the Legislative Committee of our Association.

We again will be developing legislation to be proposed in January on issues ranging from the impaired physician to public health concerns such as alcohol and drug abuse. We must certainly be prepared to deal with a myriad of others including uncompensated care, abortion and possibly even a 1990 edition of Senate Bill 576.

We have yet to achieve the support necessary to pass strict laws dealing with the sale and use of alcohol and tobacco, and these are clearly problems that cannot be considered self-serving for physicians. Of the 11 items in our 1989 legislative package, only one was passed, that being the amendment to the Medical Practice Act. The decision to place more emphasis on fighting Senate Bill 576 left us clearly unable to lobby properly for support for some of our planned legislation. We must. therefore, make a commitment to an intensified lobbying effort with an organized thrust from hired lobbyists, administrative staff, physicians and our Auxiliary.

Legislative Reception

Work already has begun on contacting key legislators and planning the legislative reception to be held this year in conjunction with the Mid-Winter Clinical Conference in order to have as many physicians as possible available to meet our legislators personally.

We must strengthen channels of communication to all members of our Association, both directly and through our 31 component societies. Brief videotaped presentations will be regularly distributed to each component society. The intent is to carry a more personalized message from your Executive Committee about major items of importance. Traditionally, many of the presidential visits to the component societies are not made until late in the term of office. Hopefully, the additional use of these videotape programs will enable wider and earlier distribution of important messages.

Secondly, we will be reorganizing the administrative staff of the Association. Included in this restructing will be a Division of Professional Resources. Greater support will be available to individual members and to component

societies for a variety of needs such as health care data, educational materials, media releases and updates on legislative activity.

Thirdly, through the West Virginia Hospital Association as part of our relationship with the West Virginia Health Care Coalition, a newly developed alliance, each component society will have access to a Fax system through which urgent State Medical Association messages can be rapidly disseminated. Together with the phone bank program sponsored by the Auxiliary, continued distribution of WESGRAM, and a key contact proposal to be further developed, these ideas will assure our membership of receiving timely communications.

Better Health Care for Aging

Like the rest of the United States, West Virginia has an aging population. With nearly 375,000 persons greater than age 60, the elderly account for nearly 20 per cent of our state's present population. In 1960, this group numbered 173,000; this increase of .117 per cent over the past 30 years is unequaled by any other age group. We must recognize that the health care needs of the elderly are multiple and variable, and require a combination of acute and long-term medical services. Your State Medical Association will continue to work closely with established groups representing the elderly to develop new programs to improve their access to affordable medical care.

I found it fascinating to discover the following two sentences while perusing an old issue of the *West Virginia Medical Journal* . . . October, 1946—the month and year in which I was born!

> "I am sure that we all agree that over the last decade the initiative in medical care has passed almost completely from our hands into the clutches of the politician."

> "In our complex society, any approach to the problem of medical care, it seems to me, leads at once to the question of responsibility."

The first phrase was written by Dr. Andrew E. Amick, President of the West Virginia State Medical Association. The second comprised introductory comments by Clarence W. Meadows, then Governor of the State of West Virginia, in his presentation before the Annual Meeting of our Association.

Take Steps Toward Next Century

It bears emphasizing that my earlier plea for a willingness to create change is nothing more than a recognition that as physicians, we ourselves must assume that responsibility to which Governor Meadows referred. And that responsibility is to first point the way, and then take the first steps toward the next century of the best health care in the world.

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*Presidential Address**

Leaders Need Authority

BILL M. ATKINSON, M.D.
Parkersburg, 1988-89 President, West Virginia State Medical Association

I wish to express my appreciation for the honor you have given me to serve as your President for the past year. I am the 121st President of this organization. The first President was elected April 10, 1867. He was Dr. John Frissell of Wheeling, and the organization was called "The Medical Society of West Virginia." In his presidential address that year, Doctor Frissell remarked on the vast changes brought about by the steam engine, the telegraph and speed with which travel was accomplished. Further on in his address, he asks "What will be the condition of West Virginia a century hence?"

Yes, Doctor Frissell had many problems to deal with as he accepted the office of the presidency; I am sure that he would be appalled at the issues that we face today. Probably the biggest problems that they encountered were communications and transportation. Even today, with all our technology, communications in our organization are still a problem.

As a part of my presidency, I have traveled this state, visited many of our 65 hospitals, and met many of the physician members and discussed issues that face our profession. I can truly say that we have an excellent medical care system in West Virginia. I can say this because I have experienced times in the rural parts of our state, as a child, when the medical system was not so good, when children died of appendicitis, tetanus and tuberculosis without ever having access to a physician. When the only hospitals were small proprietary hospitals with very limited technology. Today we have many large and small, modern hospitals, and our physicians are well-trained, dedicated practitioners who work ever so hard and serve their patients well. The beneficiaries of that service are the citizens of this state.

Legislative Threats

I am deeply troubled by the threat that hangs over our profession from our own state and federal government. We have just experienced a traumatic example of those threats in the passage of SB-576 which, by the way, was supposed to take effect yesterday. We are still dealing with the rules and regulations of that bill. And, we are currently in the shadow of the AMA in fighting the prospects of potential legislation from the federal government on resource-based relative value scale (RBRVS) and expenditure targets for Medicare patients.

> ***"I am deeply troubled by the threat that hangs over our profession from our own state and federal government."***

We have recently seen legislation from both levels of government that threatens physicians with fines and imprisonment, or both, for noncompliance. As an example of those threats, we have just seen a physician in Texas fined $20,000 for what the Inspector General of HCFA terms an "inappropriate transfer" of a patient to another health care facility.

Last year we as the Executive Committee took our direction from you in the resolutions that were

*Presented at the first session of the House of Delegates, 122nd Annual Meeting of the West Virginia State Medical Association, White Sulphur Springs, West Virginia, August 16, 1989.

passed in this House. Those resolutions were our outline of activity for the year. We were not able to carry out many of those resolutions, particularly on the legislative ones, because of the introduction of SB-576. Many of those resolutions were to be carried out over a period of years, and the work on those will be continuing. Again this year we will look to you for guidance as we again deal with the Legislature and other pressures that are facing medicine. I am sure that you will pass resolutions to deal with legislative issues that will be of the utmost importance to us as an organization; by doing so you will be giving policy direction to the Council and Executive Committee.

Executive Committee Authority

I ask that some authority be given to the Executive Committee to deal with any surprise legislation that might arise. As you know, the special House of Delegates meeting in Charleston July 9 of this year passed a motion for strict adherence to the bylaws in negotiations with respect to policy. You are aware of the impossibility of getting 16 (a quorum) members of our Council together for every issue. Or, to try to send out a notice and call a meeting of the House of Delegates to try to develop a policy to avert any crisis that might arise. At the present time the President's and Executive Committee's hands are bound from making any decisions without prior approval from the Council or House of Delegates, which renders the officers ineffective and disabled in the decision-making process which, in turn, makes this organization ineffective.

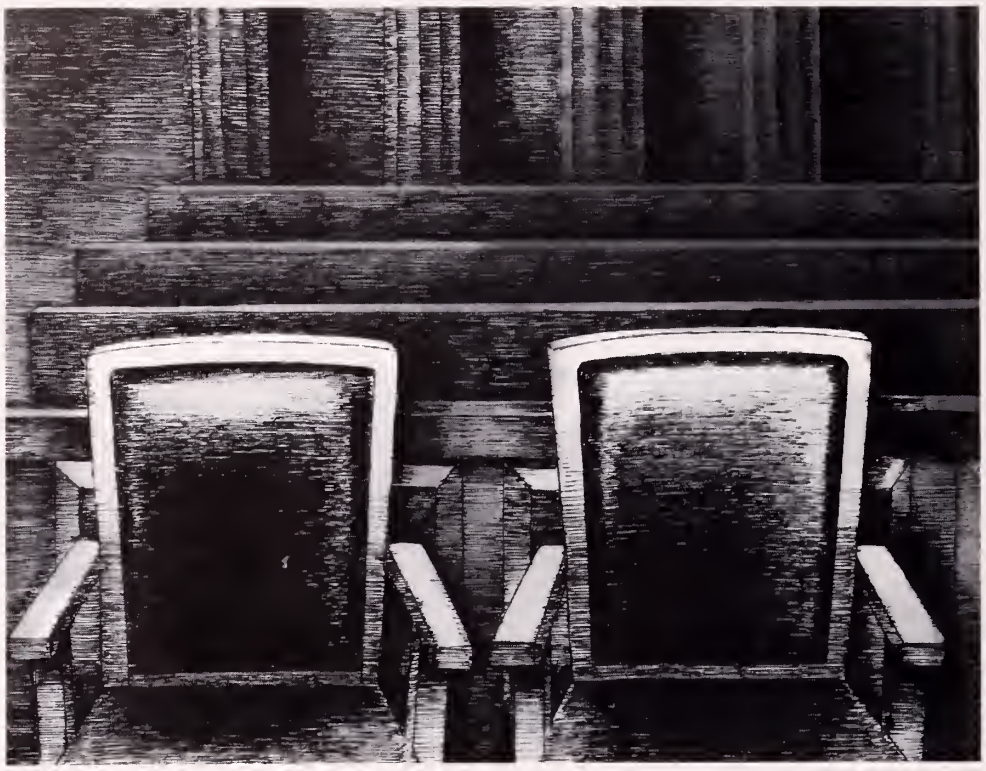
"This is probably the most crucial meeting of this House in the 122-year history of this organization."

Crucial House Meeting

This is probably the most crucial meeting of this House in the 122-year history of this organization. You have the opportunity to unify this organization and allow it to speak with authority for all our state physicians in dealing with other organizations, insurance companies, state government, the AMA, and the federal government. I have faith in you to understand these problems and to deal with them in a reasonable and prudent manner. I ask that you lend dedication and support to our new President as he faces the new year with all of its challenges and responsibilities, for you can help to aid and maintain the excellent medical care system we now have in West Virginia.

To be engaged in opposing wrong affords but a slender guarantee for being right—

William Gladstone



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In the Family Practice Setting

Routine Thyroid Function Tests As a Case-Finding Tool

JEFFREY V. ASHLEY, M.D.
Assistant Director, Kanawha Valley Family Practice Center, South Charleston, West Virginia

A comprehensive, multiphasic blood panel was used as a case-finding tool for 738 patients. The thyroid function tests T4 (total thyroxine), rT3U (resin T3 uptake), and FTI (free thyroxine index) were included in this panel. Among the 711 patients found to be clinically euthyroid without known thyroid disorder, 54 had at least one abnormal parameter. Of these patients, four new diagnoses of thyroid dysfunction were made.

All four cases had an abnormal T4 and FTI. Two patients had a slightly elevated FTI and normal T4, and have remained clinically euthyroid. All other patients had a normal FTI, and no thyroid dysfunction was noted. This gives FTI in this study a sensitivity of 1.0 and specificity of 0.993, which is comparable to what others have found (1).

The prevalence of unsuspected thyroid dysfunction was 0.56 per cent, again comparable to other studies (1-3). It would seem the high sensitivity/specificity of FTI offsets the relatively low prevalence of unsuspected thyroid dysfunction. Since FTI is a sensitive predictor of thyroid dysfunction, consideration should be given to the inclusion of thyroid function studies in existing multiphasic case-finding panels.

Introduction

The Kanawha Valley Family Practice Center is a community-based, university-administered family practice residency located in south-central West Virginia. One of the services offered there is a comprehensive, multiphasic blood panel utilized for case-finding in otherwise asymptomatic patients. The focus of this study is to evaluate the usefulness of the routine thyroid function tests (T4, rT3U, FTI), which were included in the panel, to identify cases of unsuspected thyroid dysfunction. T4 is total thyroxine, and rT3U is resin T3 uptake which is an indirect measurement of thyroxine binding globulin (TBG). TBG can be altered by several mechanisms (Table 1) in the euthyroid state and give misleading T4 values. FTI is free thyroxine index, which is a calculated value using rT3U and T4. FTI has been known to be much more accurate in assessing thyroid dysfunction than T4 alone (1).

Methods

All blood panels over an 18-month period were reviewed. Patients' charts were examined where an abnormal thyroid function test was noted. Patients with known thyroid disease or suspected thyroid dysfunction at time of acquisition of the panel were excluded from the study. A record was made of any further thyroid studies performed and any new diagnoses made. The data were grouped by age and sex, and then the results tabulated for comparison.

Results

Of 738 panels reviewed, 657 were found to be completely normal with respect to thyroid function. Of the 81 abnormal panels, 27 patients were excluded on the basis of known thyroid disease or suspected thyroid dysfunction at time of testing. This left 54 patients with various abnormalities of their thyroid function studies (Table 2).

Of the 54 patients with abnormal thyroid function tests, the majority were women (45/54 or 83 per cent). Even accounting for the fact that more women than men were in the study (449 to 262), the incidence of abnormality was three-fold with women (45/449 or 10 per cent in women versus 9/262 or 3.4 per cent in men). Most of these women were found to have a normal FTI (41/45

TABLE 1
Conditions Affecting Thyroxine Protein-Binding Capacity

Increased Binding Capacity (Resulting in the Increased Serum T_4 and T_3, but Reduced T_3, Resin Uptake)	Decreased Binding Capacity (With Low Serum T_4 and T_3, but Increased T_3 Resin Uptake)
Pregnancy	Drug therapy:
Estrogen therapy (particularly oral contraceptives)	Androgens
Perphenazine	Corticosteroids
Infectious hepatitis	Diphenylhydantoin
Acute intermittent porphyria	Salicylates
Congenital hyper TBGemia	Major illness
	Nephrotic syndrome
	Congenital hypoTBGemia

or 91 per cent), and the test abnormalities were primarily attributable to alterations in rT3U (29/41 or 71 per cent). Interestingly, the likelihood of an abnormal FTI was found to be equal between male and female (2/262 or 0.8 per cent and 4/449 or 0.9 per cent, respectively). (Table 3)

Four new diagnoses were made which included two cases of hypothyroidism, one case of painless thyroiditis, and one case of apathetic hyperthyroidism due to Grave's disease. T4 and FTI were abnormal in each case. In two patients the FTI was borderline elevated, and T4 was normal. No further tests were felt necessary in these patients as they were clinically euthyroid.

Four patients with normal FTI had further testing performed. All four patients had a TSH drawn that was normal. Three of these had an isolated low T4, and one patient had an isolated low rT3U. One of the patients with an isolated low T4 and normal TSH was sent for TRH stimulation testing that was normal. The low T4 was attributed to maintenance Dilantin therapy.

TABLE 2
Multiphasic Panels Reviewed

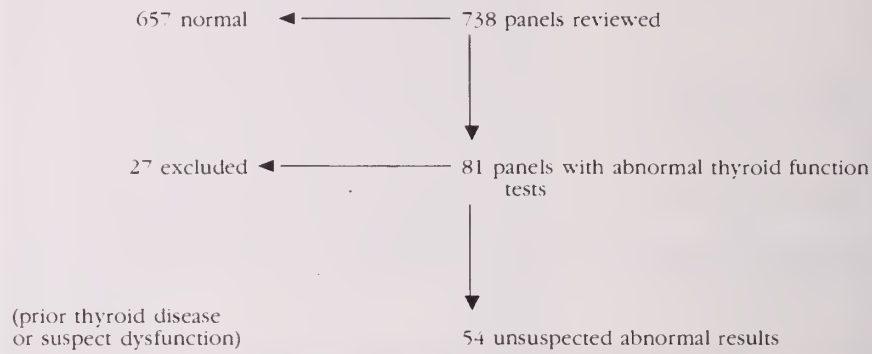

TABLE 3
Unsuspected Abnormal Thyroid Function Tests

	Total	Female	Male
FTI Normal			
rT3U only	34	29	5
T4 only	13	11	2
T4 & T3U only	1	1	0
FTI Abnormal			
T4 & FTI	4	2	2
FTI only	2	2	0
Totals	54	45	9

Discussion

The prevalence of unsuspected thyroid dysfunction has been noted to be 0.44 per cent - 0.81 per cent in other studies (1-3). The prevalence in this study is comparable at 0.56 per cent. It furthermore has been shown that FTI is a very sensitive and specific test for diagnosing occult thyroid dysfunction (1). The sensitivity and specificity in this study was 1.0 and 0.993, respectively. Although few extra tests were ordered (four TSHs and one TRH stimulation), this could be improved further by greater reliance on FTI to assess thyroid dysfunction. It is known that physicians tend to discount borderline abnormalities on screening multiphasic panels (4). An understanding of the high sensitivity and specificity of FTI should encourage efficient detection of thyroid dysfunction. It has been proposed that T4 alone be tested and rT3U be obtained to evaluate abnormal T4 values (5). In the present study this would have resulted in 693 fewer rT3U determinations.

Conclusion

The value of multiphasic screening on an outpatient basis is still a matter of controversy, and its utilization varies with the judgment of the individual practitioner (6). The inclusion of T4 with or without rT3U in existing multiphasic screening panels appears to be justified due to the high sensitivity/specificity of the FTI. In most cases where regional labs are involved, this can be done for minimal extra cost. Specific groups of patients have been targeted for thyroid function screening in the literature. These groups include the elderly and postpartum patient as well as those with Turner's syndrome, psychiatric problems and SLE (7-14). There is also a female predisposition to thyroid dysfunction as well.

The relatively low incidence of thyroid dysfunction is compensated for by the high sensitivity and specificity of the FTI. Highly sensitive TSH determinations (immunoradiometric assays) can now distinguish between hypo-, eu-, and hyperthyroidism, and may someday replace other thyroid tests as a case-finding tool (15-18). At this point, the test is too expensive compared to more traditional tests of thyroid dysfunction.

Acknowledgements

1. Richard E. Kleinmann, M.D., Endocrinologist Consult
2. Sarah Miller, Manuscript Preparation

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Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Smoke Inhalation

Discussants:

MARIO C. BATTIGELLI, M.D., M.P.H.
Professor of Medicine and Director, Institute of Occupational Health & Safety

KEVIN A. HALBRITTER, M.D.
Assistant Professor of Medicine, Section of Comprehensive Medicine

JOHN E. PARKER, M.D.
Clinical Assistant Professor of Medicine, Section of Pulmonary Diseases

Two cases of smoke inhalation injury are reported with a brief review of the pertinent literature. The frequency of occurrence, the mortality rate, the clinical course of this common event are discussed with emphasis on the following facts: 1) Pulmonary injury is often associated with skin burns and, conversely, skin burns, particularly when severe, are accompanied by significant effects on pulmonary function; 2) Domestic fires, which account for most of these casualties, may involve complex exposure to a variety of aggressive agents (CO, HCN, NO_x, etc.), causing systemic effects; 3) The clinical course of the most severe occurrences characteristically consists of three phases, namely acute pulmonary insufficiency, pulmonary edema and bronchopneumonia, in sequence; 4) The mortality rates of these clinical phases range at or about 50 per cent; 5) Significant laryngeal edema and even pulmonary edema may follow an interval of several hours, during which both subjective and objective evidence of injury may be minimal or unnoticed; and 6) The determination of carboxyhemoglobin levels often helps in gauging the severity of the exposure and related effects of either immediate or delayed appearance.

Smoke inhalation has been experienced probably since fire was discovered. Pliny the Elder provided one of the earliest descriptions of the events before falling victim to the volcanic miasmas in the 1st century AD (1). Burns and smoke inhalation continue to yield an ominous harvest of casualties up to the present times without much probability of diminishing. Since 1965 about two million people have suffered fire injuries each year in the United States. Each day it is calculated that some 25 deaths occur from fire and smoke inhalation in our country (2). Most of these victims are killed in domestic fires (68 per cent) (3). In fact, while public opinion is much exercised by concerns directed to harmful emissions of industry, the vital records of everyday life bear witness to the high incidence of domestic fires where injury and often death follow smoke inhalation and thermal harm, all frequently originating from commonplace accidents involving fire.

Patients with severe inhalation injury experience three clinical stages reflecting successive phases of pathology: acute pulmonary insufficiency, pulmonary edema and bronchopneumonia (4). Each of these phases carries a mortality of about 50 per cent. Injuries of this degree, one should point out, occur in about 21 per cent of victims of fire accidents whenever significant injury is experienced (5).

Two recent instances of fire accidents have come to the wards of Ruby Memorial Hospital and have encouraged a brief review of the subject. The clinical presentation, the diagnostic dilemma and the treatment of these casualties are discussed in this brief review.

Case 1:

A 70-year-old white male was in his usual state of good health

until he awoke surrounded by smoke and flames coming from one end of his mobile home. He then proceeded to drag out his wife who had passed out. He was brought to the hospital by the rescue squad.

Physical examination revealed a pleasant, apprehensive gentleman with smoke residue on his face and hands and around his nostrils. Blood pressure was 120/70, pulse 102; there were no erythema or skin lesions noted. Turbinate mucosa displayed carbonaceous soot. Lungs had diffuse inspiratory and expiratory wheezing. Heart had a regular rate and rhythm with distant sounds. The rest of the examination was noncontributory. Laboratory data revealed results across the entire SMA 25 within normal ranges, except CPK(324) and LDH(336).

EKG was without acute changes, chest x-ray had no acute process, arterial blood gas showed a pH of 7.37, PCO2 of 25.7, PO2 of 30.6, bicarbonate of 15 on 100 per cent oxygen, and carboxyhemoglobin level was 8.3 per cent with oxygen saturation of 91.8 per cent. The patient was admitted and placed on 100-per cent oxygen. He was given terbutaline and mucomist treatment to relieve the bronchospasm and help with clearance of smoke particles. His arterial blood gas was repeated after treatment with 100-per cent 02 and revealed a pH of 7.40, PCO2 of 39, PO2 of 89, bicarbonate of 25, and carboxyhemoglobin of 0.6 per cent. He progressively experienced a decrease of black expectoration, and his chest x-ray remained clear.

Case 2:

A 64-year-old white male with a history of COPD and alcoholic cirrhosis was at home sleeping when he was awakened by a neighbor at approximately 3 A.M. At that time firemen were present outside his house, and his room had filled with smoke. It is unknown how long he had been in the smoke-filled room. He then escaped by jumping out of his window and fell approximately 12 feet to the ground as firemen attempted to catch him.

He had a cough with production of carbonaceous sputum. He suffered multiple small burns, the largest being a 5 x 5-cm, full-thickness burn on his right palm. He had several 1 x 1-cm burns on his left palm as well as several small second-degree burns on his fingers and forearms bilaterally. In the Emergency Department his vital signs showed a respiratory rate of 20, blood pressure 120/80, pulse 100, temperature 35.5° C. This was a healthy-appearing 64-year-old who smelled of smoke. Head and neck were unremarkable, lungs had bibasilar rales with expiratory wheezing heard throughout, and the heart had a regular rate and rhythm without murmur. Liver was enlarged three cm below the right costal margin. There was a question of splenomegaly. Extremities revealed the right palm burn as well as numerous small burns on his left arm and forearm. Arterial blood gas on six liters oxygen by nasal cannula revealed a pH 7.28, PCO2 43, PO2 of 90, bicarbonate 20.5, carboxyhemoglobin 15.7, and an 02 saturation of 82 per cent. Chest x-ray revealed mild interstitial changes and hyperinflation.

"Oxygen supply, assisted ventilation and the maintenance of airway patency form the mainstay of management in all cases."

He was placed on oxygen to accelerate the clearance of his carboxyhemoglobin, and was carefully monitored. He was given whirlpool treatments and Silvadene cream to his burns and systemic antibiotics. His respiratory status was monitored with serial arterial blood gases and showed subsequent improvement. Whirlpool treatments as well as Silvadene treatments to his burns were continued. The carbonaceous expectoration resolved to a mucoid clear phlegm within 48 hours. The burns were debrided daily. The cutaneous lesions gradually improved and he was discharged with a final diagnosis of smoke inhalation and first-, second- and third-degree burns to his hands and forearms.

Thermal injury is associated with a clinical course and pathology according to a dose-response relationship. The more extensive the injured area and deeper its severity, the greater is the functional damage and the less favorable its prognosis.

Two organs, obviously, bear the burden of main injurious impact, namely skin and respiratory surfaces. Each of these may be involved independently of the other, according to the modality of exposure and characteristics of the accident (6). However, the common experience suggests that both organs are often involved simultaneously, and may display a mutual interdependence. Thermal damage to the skin, for instance, is associated with an increase in lung lymph flow and pulmonary interstitial edema (7). Conversely, deep respiratory injury is often associated with evidence of facial burns and singed nasal vibrissae (8). In fact, a clinical triad has been described by Stone (4) in terms of history of exposure in enclosed spaces, evidence of facial burns and singed vibrissae, carrying a mortality of 46 per cent, seemingly the reflection of a severe injury.

Factors of Exposure

The main elements of an injurious exposure consist of 1) heated air, 2) particulates (solid or liquid), and 3) gases produced by the pyrolysis of combustible material. Admittedly, the specific heat of dry air is quite limited. The injury may be confined to the exposed skin and the upper airways surfaces exclusively when

exposures is limited to superheated air. However, when water is present, a much more significant and deeper lesion may be experienced since water vapor has a 4,000-fold greater specific heat than dry air.

Particulates, when composed of simple carbonaceous material, may be credited for only minimal injury due to their minuscule toxic action. When, however, these particulates absorb gases and liquid vaporized in the conflagration, major and, at times, disastrous effects may readily follow due to the action of these agents carried by the particulate matter.

The nature of the combustion gases obviously depends on the material and structures affected by the fire (Table 1). Carbon monoxide remains one of the most common components of smoke, quite able to deliver devastating effects to the victims of accidental exposures (Table 2). Indeed, the quantitative determination of carboxyhemoglobin, the characteristic product of reaction between carbon monoxide and hemoglobin, is an excellent bedside indicator to gauge the severity of these exposures (8).

Clinical Presentation

The most typical manifestations of smoke inhalation include cough, sooty sputum, shortness of breath, presence of burn, and an impaired sensorium. The latter is a strong indication for systemic effect, usually secondary to the inhalation of carbon monoxide. The presence of cutaneous burns not only opens the possibility for significant infectious complications, but almost invariably heralds the presence of significant adverse modulation of the immune mechanisms, with release of powerful factors of secondary injury involving the respiratory tissues and the body at large (9).

Auscultation may often, but not always, reveal wheezes and crackles, a finding which not uncommonly is delayed for several hours after exposure.

The chest x-ray similarly may appear normal at first, with development of edema and/or bronchopneumonic infiltrates 48 or more hours following exposure. The earliest evidence of lung injury on x-ray is peribronchial thickening, as was the case in our second patient (10). Pulmonary scans such as 133 Xe perfusion may also provide early evidence of pulmonary injury (11).

Bronchoscopy and laryngoscopy offer a most valuable approach to monitoring intraluminal lesions including incipient glottis edema, a complication often of subtle and ominous character.

Measurements of lung water content may also provide a useful parameter of early injury although the technique usually is not readily available. Ancillary evidence of the same phenomenon revealed by plain x-ray films and traditional clinical follow-up is quite sufficient to monitor most patients (13).

Laboratory determinations of great practical value include the arterial blood gases, carboxyhemoglobin levels and spirometry. Fluid balance, indices of infection, and nutritional intake complete the basic care program of these casualties.

Treatment

The care of casualties with fire and smoke-inhalation injury must address both the impaired or threatened ventilatory function, both of the immediate or delayed onset, and the systemic effects caused by carbon monoxide and other components of smoke. Oxygen supply, assisted ventilation and the maintenance of airway patency form the mainstay of management in all cases. Secondary care focuses on burns, electrolytes and fluid balance, and infection control. The use of hyperbaric chambers advocated particularly for the profound toxic state of carbon monoxide effect assures prompt oxygenation and a rapid reduction of the half-life

TABLE 1
Products of Pyrolysis in Fires

SOURCE	*STRUCTURE*	*PRODUCT*
Polyvinyl Chloride	Wall & Floor Covering; Cable Insulation	$COCl_2$ HCL CO
Polyurethane	Upholstering	Isocyanate HCN
Lacquered Wood Veneer Wallpaper	Furniture	Acetaldehyde Formaldehyde NOx; HCN
Acrylic	Light Fixture	Acrolein
Nylon	Carpet; Curtains	NH_3; HCN
Acrolein	Carpet	Acrolein; HCN
Polystyrene	Miscellaneous	Styrene; CO

TABLE 2
Carbon Monoxide Dose-Effects

CLINICAL PRESENTATION	*PERCENT CARBOXYHEMOGLOBIN*
No Symptoms	0-10
Possible Headache	10-20
Headache	20-30
Severe Headache, Dizziness, Dimmed Visual Acuity, Nausea, Vomiting, Prostration, Collapse	30-40
Syncope	40-50
Coma	>50
Death	>70

of carboxyhemoglobin, from that of 240 minutes, on air, and that of 60 minutes on oxygen (at ambient pressure), hastening most effectively the elimination of carbon monoxide.

Repeated use of bronchoscopy allows the immediate detection of possible obstruction of the airways, be this from inhaled debris, sloughed tissues or secretions and edema.

Early debridement and even excision of burned skin areas has provided dramatic reduction of significant immune-modulation effects associated with third-degree burns (9).

The use of steroids remains controversial and is generally in disfavor, although experimental studies seem to support their use (12).

Above all, any casualty of fire and smoke inhalation fully warrants vigorous and alert observation, with anticipation of pending complications and prompt correction of significant compromise such as laryngeal edema, bronchopneumonic processes or infections, all events associated with an exceedingly high mortality.

Finally, the awareness that any house fire may indeed expose a victim to complex mixtures of pollutants as powerful agents of injury ought to encourage the greatest degree of care and immediate intervention even in the primary and less well-equipped care station and settings.

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Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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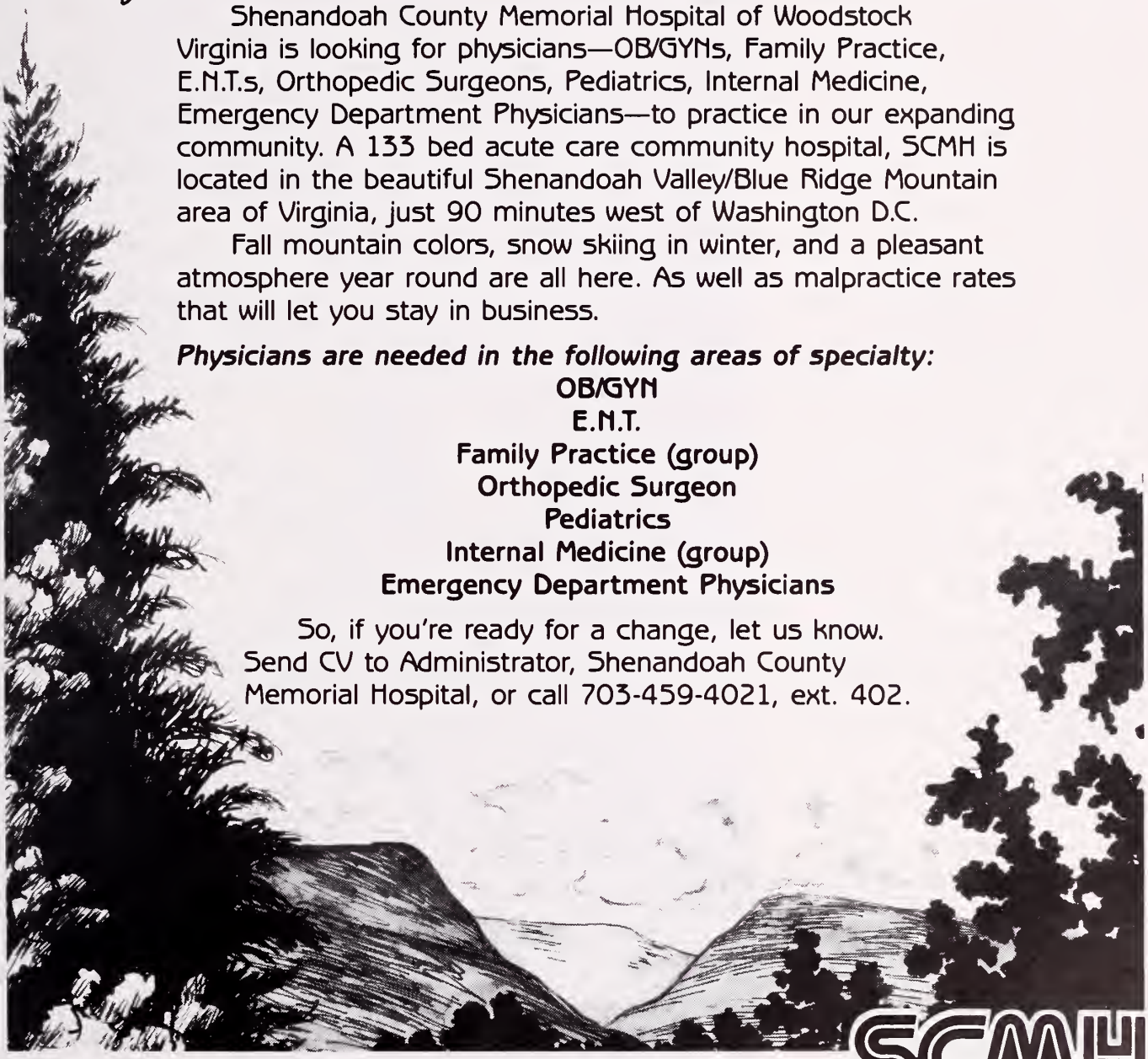

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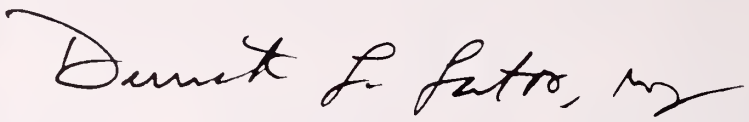
President's Page



"Now, I want to focus on what must be our direction for the future."

Fitting Proposals

"The hot days of late summer were quickly fading, bringing cool nights and the welcome nightsongs of chirping crickets and barn owls. Driving the winding West Virginia road, he smiled, fondly remembring his own school days as the big yellow buses with their blinking red lights appeared suddenly in the misty morning fog. A watery eye came to his face as he thought about many things of the past."

These lines could easily be taken from a novel describing the experiences of a man returning to his home town after a long absence. But they are very apropos to any of us as we reminisce about things en route to our offices or hospital rounds. Quickly, we must also remember that the past should only serve to guide us to tomorrow. My message to you last month recalled the aftermath of a crucial period in our lives as physicians in West Virginia. Now, I want to focus on what must be our direction for the future.

During my address at the Annual Meeting, I called for a greater commitment from our membership. Following that emphatic plea there was a pleasant deluge of requests to be involved in committees and other special projects. As a result, more than 220 of our members have been appointed to the several standing committees of the Association. This outpouring of interest will kindle a bright fire of activity for a long time to come.

Contained within this issue of the *Journal* are the 44 resolutions that were acted upon during our Annual Meeting in August. Of these, two particularly must be emphasized. Resolution 42, modeled after the Health Care Policy Agenda for the American People, calls for an extensive examination of all the forces that impact on health care throughout West Virginia. It is only fitting that this proposal has been made by the medical profession. This resolution further directs the Council to petition the Governor of West Virginia to create the body of persons necessary to accomplish this tremendous task. This move must be seen for what it was intended: to provide a positive proactive approach to health care problems rather than a quickly designed constraining reaction to only one facet of the equation.

Resolution 2 calls for the formation of a joint committee between health providers, State Administration and the Legislature to enact legislation to develop methods and mechanisms to improve the health care of all West Virginians.

We, as physicians, must take the lead by providing thoughtful alternatives, choosing solid stones which will support our weight and not allow us to slip into the turbulent current between public demands and governmental promises. Having driven the winding roads before, we know to anticipate the flashing red lights just around the next curve. By applying firm, but cautious, pressure on the proper pedals, we will be able not only to maneuver our own way safely, but also to lead the traffic behind us to our common destinations.

—Derrick L. Latos, M.D.

A New Experience

It's probably official. When the AMA, the Administration and Congressional Committees all agree on a matter of medical policy, that makes it about as official as you can get. None of these players disputes the given, that Americans are getting too much medical care. The agreement is that we must somehow stop giving that much care.

The only remaining arguments are over who will ration the care and how they will do it. The American Medical Association has surrendered its decades-old position that doctors work for and protect people, not some fund. It has been our position that we are simply providing those benefits that have been promised to American citizens by one Congress after another. We have made no promises to anyone about anything other than that we will help patients get those benefits promised them in various laws.

As a part of our position it has been implied that if anyone wants to renege on any of those promises, or to take them back, it is all right with us. We will obey those laws too. But please don't expect us to conspire to cheat patients out of what is legally theirs.

That all seems to be gone now. We are in agreement that what we can now supply in the way of medical benefits is not worth the cost. Rather than on new medical benefits, the public needs to spend more of its money on new clothes, a little more on better food, new automobiles, more on leisure and entertainment and more on recreational activities including, perhaps, more recreational refreshment.

This has been agreed upon despite the fact that the public has never shown any hesitation to spend whatever percentage of its income necessary to maintain good health. We have decided that increasingly sophisticated levels of medical care are not worth it because large corporations and government find themselves with unfunded liabilities for medical care sufficient to cause fear of bankruptcy in each of them.

At the same time all the hand-wringing has been going on about medical care costs, in the next room our government has been dealing with the problem of insolvent savings and loan institutions. With great dispatch our government decided to absolve essentially criminal activity on the part of these institutions, their officers and directors and to bail all of them out to the tune of three hundred billion dollars. Our government rewards and encourages criminally inept behavior in Finance while it penalizes and discourages excellence in Medicine.

It occurs to us that three hundred billion dollars might bail out the unfunded medical care liability of most or all of our major corporations. It is unlikely that such an amount would do much for the unfunded medical care liability of government, but there are apparently few who give a damn about trifles such as this anyhow.

The AMA says we can hold down the quantity of medical care with Practice Guidelines which some doctors suspect is a euphemism for a cookbook approach to medical care. Regardless of that, the suggestion of Practice Guidelines as an alternative is an acknowledgement of our endorsement of the necessity of some form of rationing.

What a shame! Another defeat! Not just of the AMA but of the sick, the impaired and the injured among us all and those who unfortunately will achieve that status in the future.

The Bush Administration and Congress are dead set on ETs - - - Expenditure Targets. This is an overt form of rationing wherein a fixed amount of money for medical care is allocated on a regional basis. In this scheme doctors are forced into the role of rationers and our patients are presented as targets for our Federal economy.

Official or not, acknowledged or not, it is certain that in the near future Americans will be experiencing something less than the best in medical care. We predict that they will not like it.—SDW

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications to this Journal for publication. The author shall be held entirely responsible. Editorials printed in The Journal do not necessarily reflect the official position of the West Virginia State Medical Association.

Our Readers Speak

Takeover by 'Hospital Companies'

Thank you for the Special Article, "No Place to Hide," by Phillip H. Goodwin, F.A.C.H.E. (what the H-- is that?). He certainly lays it on the line when he chose what the federal government and the various states plan to do in regard to the high cost of medical care *[August Journal]*.

What he failed to do was to point out that hospitals—such as his own—have been and will continue to be the real culprits in this problem. The patients can still afford physicians—what they can't afford is hospitalization. Then, after failing to announce himself as the culprit, (most hospital administrators would brag about it) he goes on to point out that his mission is no longer to be "a hospital" but to be a "health services company."

Until medical associations have the courage and the leadership to do the following, physicians will continue to be taken over by these "hospital companies":

1. Outlaw the concept of "private, not-for-profit corporations." That is the worst euphemism ever thought up.
2. If "private, not-for-profit" corporations cannot be outlawed, then at the very least, allow hospitals only to be hospitals. They should not be allowed to have any other corporation under their wing.
3. Deregulate hospitals. They have become such a haven for high-priced MBAs, nonworking Ph.D. and degree nurses, and medical directors that the hard-working floor nurses cannot get their job done because of the time spent entertaining bureaucrat persons with their double-wide clipboards.
4. The American Medical Association should completely dissociate itself from the American Hospital Association and all of the ills which it has produced. Hospitals should be deregulated. The State of Minnesota was the first state to invent certificates of need. The State of Minnesota was also wise enough to recognize the ills created, and thus did away with certificate of need. However, the State of West Virginia found that the "certificate of need" concept served the needs of certain establishment groups so well that I doubt that we will ever be rid of it.

James H. Wiley, M.D.
1197 Pineview Drive
Morgantown, WV 26505

Wildlife Fund

I want to thank you for the wonderful manner in which you printed our article on the Wildlife Endowment Fund. Your layout and breakout made made the article attractive and easy to read.

I am sure that your efforts will help the Department of Natural Resources inform the citizens of West Virginia about the opportunity they have to help save our wildlife heritage.

Also, please convey my appreciation to Doctor Ward for his supportive editorial—I wish we had more like him.

Once again, thank you for your assistance.

Marshall K. Snedegar
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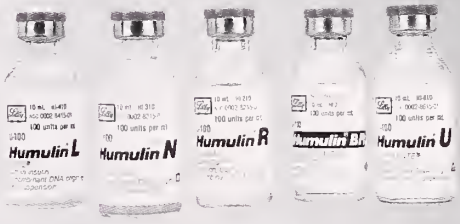

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Derrick L. Latos, M.D., Assumes Presidency at Annual Meeting

Derrick L. Latos, M.D., of Wheeling has assumed duties as the new President of the West Virginia State Medical Association. (See photos on Pages 419 and 440)

Doctor Latos was installed as President by Bill M. Atkinson, M.D., of Parkersburg, the retiring President, at the concluding session of the House of Delegates, Saturday, August 19, during the 122nd Annual Meeting of the Association in White Sulphur Springs at the Greenbrier.

Doctor Latos, a nephrologist, has served as Medical Director of the Wheeling Dialysis Center, a division of Wheeling Hospital, since 1977. A Clinical Professor of Medicine at West Virginia University School of Medicine, he holds an academic staff appointment at Ohio Valley Medical Center where he was a past medical staff President.

Convention activities began with a meeting of the Executive Committee on Tuesday, August 15.

Other New Officers

Doctor Atkinson presided at both House sessions. He automatically became Chairman of the Council for the new Association year, succeeding Cordell A. De La Pena, M.D. of Clarksburg.

Chosen President Elect was Michael M. Stump, M.D., of Elkins, a pathologist, who will be installed as President during the 1990 Annual Meeting in White Sulphur Springs at the Greenbrier.

Constantino Y. Amores, M.D., Charleston neurosurgeon, was elected Vice President.

Reelected Treasurer was William C Morgan, Jr., M.D., Charleston otolaryngologist.

Harry S. Weeks, Jr., M.D., of Wheeling was elected Delegate to the American Medical Association, and John B. Markey, M.D., Charleston, was reelected as an AMA Delegate. Stephen D. Ward, M.D., of Wheeling is WVSMA's other AMA Delegate.

Elected AMA Alternate Delegates were Robert D. Hess, M.D., of Clarksburg and Stephen L. Sebert of Morgantown. Carl J. Roncaglione of South Charleston was reelected AMA Alternate Delegate.

Council Members

Newly elected to Council were Drs. Kenneth J. Allen, Glen Dale; John E. Beane, Parkersburg; Robert P. Pulliam, Beckley, and Edward M. Spencer, Bluefield. Karl J. Myers, Jr., M.D., Philippi, who was named to Council in 1988 to fill the unexpired term of Doctor Stump (who was elected to the vice presidency), was elected to his first two-year term as Councilor. Gary G. Gilbert, M.D., Huntington, who was named as an additional Councilor in District IX (Mason, Putnam, Cabell, Lincoln and Wayne counties) in 1988 because of membership growth, also was elected to his first term.

Michael M. Stump. M.D.
President Elect

President Latos has appointed Fred F. Holt, M.D., Charleston, to serve the unexpired term of Doctor Amores, who was elected to the vice presidency.

Physicians reelected to Council were James L. Comerci, Wheeling, and James D. Helsley, Berkeley Springs. Robert W. Lowe, M.D. of Huntington, who served the maximum allowable two terms on Council was incorrectly listed as eligible for reelection due to WVSMA staff error. President Latos has named Joseph B. Touma, M.D., Huntington, to replace Doctor Lowe.

Holdover Councilors whose terms will expire in 1990 are Drs. Paul E. Frye, Fairmont; Dennis F. Saver, Newburg; Michael J. Lewis and Roger E. King, Morgantown; Larry C. Rogers, Petersburg; James L. Bryant, Clarksburg; Porfirio R. Pascasio, Weston; Warren Point, Donald E. Farmer and William C. Revercomb, Jr., all of Charleston; and Rodney L. Stephens, Logan.

Under the terms of the Constitution, Doctor De La Pena, the Council Chairman last year, becomes Councilor-At-Large for 1989-90; and Charles E. Turner, M.D., Huntington, will serve as Junior Councilor during the period.

Resolutions, Amendments

The House adopted a record number of 26 resolutions from 44 submitted, and two resolutions were referred to WVSMA committees. (See box listing, "Resolutions in Brief," on Page 442. The full text of the resolutions appears on Page 458.)

Bylaws amendments approved include those which:

—add to the Association's standing committees an Audit Committee to oversee the financial workings of WVSMA

General Annual Meeting scene immediately preceding the second and final session of the WVSMA House of Delegates August 19 as delegates prepare to act on a mammoth amount of Association business and policy including 44 proposed resolutions.

—permit telephone conference calls in determining the existence of a quorum at a special meeting of Council

—formalizes previous House action in establishing a Young Physicians Section

—gives the Executive Committee the authority to take actions in the interest of the Association when there is not time to call a special meeting of the Council or House of Delegates

Approved on first reading this year but subject to final approval next year is a constitution and bylaws amendment which would provide representation on Council for each component society rather than being limited to the present 14 Councilor Districts.

Also approved on first reading was a constitution and bylaws amendment which would change the quorum for a Council meeting from the presently required majority to 40 per cent of the Council membership. The purpose of this amendment is to help assure that a quorum of the Council can be obtained in view of the fact that the Council will grow to at least 44 members if the representation-for-each-component-society amendment is approved.

(See Page 464 for the full text of proposed and approved amendments.)

The President

President Latos, a native of Windsor Heights, served on Council in 1981-87, and holds an academic staff appointment at Ohio Valley Medical Center in Wheeling. In addition, he is on the active medical staff at Wheeling Hospital. He is active in medical education programs at several area hospitals.

Certified by the American Board of Internal Medicine and the American Board of Nephrology, Doctor Latos is a board member of the Mid-Atlantic Renal Coalition and the Renal Physicians Association, and was Chairman of the End Stage Renal Disease (ESRD) Network Coordinating Council of the Virginias in 1982-87.

He has conducted clinical research studies involving energy expenditure in uremic patients and on the effects of acute and chronic exercise on dialysis patients.

The new President is a graduate of Wheeling College (which named him Distinguished Alumnus in 1984), and received his M.D. degree in 1972 from WVU School of Medicine.

He completed his internship and residency at Vanderbilt University Hospital in Nashville, Tennessee, and was a fellow in nephrology there and at the Nashville Veterans Administration Medical Center. He then was Chief Resident in Medicine at the VA center for one year before entering private practice in nephrology in Wheeling in 1977.

He was recipient of a WVSMA scholarship while attending medical school at WVU.

Doctor Latos is a board member of the Wheeling Crippled Children's Society and Rehabilitation Center, and the Wheeling YMCA. He has devoted considerable time to youth soccer as a coach and board member of the Wheeling Y Soccer Association.

He and his wife, Michelle, are the parents of two sons, Michael, 12, and Patrick, 10.

President Elect

Doctor Stump, Pathologist and Director of Laboratories at Davis Memorial Hospital in Elkins, served on the WVSMA Council in 1985-88, and was a member of the Governor's Task Force on AIDS as the WVSMA representative. In the latter capacity he played a key role in drafting the present state legislation on AIDS treatment and testing.

He is a Past President of the West Virginia Society of Pathologists and currently is a member of its Board of Governors.

Doctor Stump received his M.D. degree in 1948 from the University of Arkansas, entered general practice in Philippi in 1949, and then served with the U.S. Air Force in 1952-54. He returned to general practice in Philippi and Ceredo in 1954-60, beginning his pathology residency in 1960.

He is Chairman of the WVSMA Quality Assurance Committee and a member of the WESPAC Board of Directors.

'89 Convention

On the left, Kanawha County doctors prepare for the start of the second and final House session August 19. In the right photo, Carl J. Roncaglione, M.D., South Charleston, left, a member of the WVSMA Constitution and Bylaws Committee, and Cordell A. De La Pena, M.D., Clarksburg, 1988-89 Chairman of the Council, present proposed constitution and bylaws amendments to Council at it pre-convention meeting in White Sulphur Springs.

Members of the WVSMA Publication Committee who met during the Annual Meeting are, from left (seated), Stephen D. Ward, M.D., Wheeling, Chairman and Editor of the West Virginia Medical Journal, and Vernon E. Duckwall, M.D., Elkins, Associate Edtitor, The Journal; standing, from left, Harvey D. Reisenweber, M.D., Martinsburg, and John M. Hartman, M.D., Charleston, Associate Editors; Leon B. Briggs, Jr., Huntington, Student Member; Barbara M. Schroeder, M.D., Morgantown, Resident Member, and Joe N. Jarrett, M.D., Oak Hill, Associate Editor. On the right are WVSMA President Derrick L. Latos, M.D., Wheeling, and his wife, Michelle, with their sons, Patrick, left, and Michael.

In the left photo, Bill M. Atkinson, M.D., Parkersburg, left, 1988-89 WVSMA President, presents pins to Drs. William L. Neal, Huntington (center) and Joe N. Jarrett, Oak Hill, who were honored as 50-year medical school graduates. Also so honored was Frank J. Zsoldos, M.D., Beckley, who attended the convention but was not present for the above presentation. On the right is William A. Sederburg, Chairman, Michigan Senate Health Policy Standing Committee, who spoke on "The Doctor and the Politician" at the first general session.

On the left, checks were given to Drs. Robert M. D'Alessandri, Dean, WVU School of Medicine (left), and Charles H. McKown, Jr., Dean, MU School of Medicine, during the first House session. Mrs. Marian Thompson (James), Clarksburg (left), and Mrs. Alice Edwards (T. Keith), Bluefield, AMA-ERF Co-Chairmen, WVSMA Auxiliary, presented the checks ($19,472.47 for WVU and $9,485.87 for MU), representing the annual contribution by state doctors and the Auxiliary to the medical schools through the Education and Research Foundation of AMA (AMA-ERF). In the right photo, Mrs. Ginny Reisenweber (Harvey), Martinsburg (left), 1988-89 Auxiliary President, presents the gavel to Mrs. Lois Spencer (Edward), Bluefield, new Auxiliary President, at the conclusion of the Auxiliary meeting held concurrently with the WVSMA convention.

Among visiting state medical association presidents were Drs. Bob M. DeWeese, Kentucky, left, and William J. Marshall, Ohio, left photo. Governor Gaston Caperton, center, is shown at the podium as he addressed the second House session August 19. On the right, Edward R. Annis, M.D. (right), Past President of the AMA who delivered The Thomas L. Harris Address during the opening exercises, chats with Drs. William Lavery, Huntington (left) and James B. Magee, Elkins.

AMA-ERF

VICKIE L. HELSLEY
WVSMA Auxiliary AMA-ERF Co-Chairman, Berkeley Springs

Now that the Annual Meeting at the Greenbrier is over, our thoughts must once again turn toward the business at hand. Medical Schools are busy training future physicians and performing research to find new treatments and cures. This becomes increasingly more difficult with cutbacks in government funding. That is where the American Medical Association Education and Research Foundation (AMA-ERF) really becomes essential. It provides the necessary funds to get the job done.

The West Virginia State Medical Association Auxiliary is active in AMA-ERF. It is the major health-related charitable endeavor in which the Auxiliary is involved. Your help is needed! All donations are tax-deductible. If you wish, you may send a donation as a memorial or as a "Thank-You" for a professional courtesy. The Auxiliary also sponsors a sharing card each December. Any donations may be designated for the medical school of your choice.

Medicine and the medical community both benefit from an AMA-ERF donation by promoting the quality of medical education. So, do it now! Write your check to "AMA-ERF" and give it to your local AMA-ERF chairman, your local medical association treasurer, or mail it directly to: Vickie L. Helsley, WVSMA Auxiliary, AMA-ERF Co-Chairman, P.O. Box 616, Berkeley Springs, WV 25411.

Thank you for your support!

Radiological Society Officers

Gary Marano, M.D., of Morgantown was elected President of the West Virginia Radiological Society, Inc. at its meeting in August held in conjunction with the WVSMA Annual Meeting in White Sulphur Springs.

Other officers are Drs. Dennis Burton, Huntington, Vice President; Richard Thompson, Beckley, Secretary/Treasurer; John Frich, Jr., Morgantown, and William Hayes, Charleston, ACR Councilors; and Michael Hogan, Morgantown, and Ray Harron, Bridgeport, Alternate Councilors.

Resolutions in Brief

Resolutions Approved by WVSMA House of Delegates, 122nd Annual Meeting, 1989 (See full text of resolutions on Page 458.)

Resolution No.	Relating to:	Summary
1.	unified membership	committee to be appointed to report back to 1990 Annual Meeting
2.	joint committee formation	state government, legislative and health care provider members to seek health care improvements
3.	state-provided medical liability insurance for physicians	state-provided coverage of obstetric services to Medicaid patients would be expanded to all physicians treating Medicaid patients
4.	repeal of 1989 Omnibus Health Care Act	WVSMA to work for repeal, support legislators who work for its repeal
5.	guidelines for alcohol and drunk driving laws	encourage Legislature to follow guidelines of Surgeon General
6.	mandatory seat belt law	maintain WVSMA position of support on a priority basis
7.	WVSMA spokesperson	spokesperson to be the President, who is to indicate whether giving Association or individual statement
8.	regular financial audits	feasibility study for WVSMA to provide audits and dues billing service to component societies; consider requiring all employees and officers responsible for fiduciary matters to be bonded
9.	WVSMA Committee on Health and Well-Being	committee to work with Board of Medicine and legislative leaders to allow physicians and other health care providers to seek care for substance abuse without publicity
10.	WVSMA Community Relations Department	investigate establishment of such a department to help public fully understand the role of the physician in the community and as a health care provider
11.	WVSMA funds supporting PMCN	take steps to see that funds advanced to PMCN be repaid and no further funds be advanced
12.	establishment of a rapid communication network	to be developed to permit rapid dissemination of information throughout Association
20.	WVSMA survey about Annual Meeting format and site	WVSMA to determine if (1 summer meeting should be shorter business meeting only; (2 summer meeting should move around state; (3 should remain like it is. Results to be published in West Virginia Medical Journal
22.	WVSMA Auxiliary appointments	Auxiliary President to be voting member of Council; Auxiliary Legislative Chairman to be voting member of WVSMA Legislative Committee
26.	AMA reports	listing of AMA reports to be published in WESGRAM and, upon request, a copy of any report will be distributed to members at cost
27.	advertising Rx drugs	WVSMA to go on record opposing this practice, with this message to be forwarded to appropriate pharmaceutical companies

Resolution No.	Relating to:	Summary
28.	indigent care provided by retired physicians	WVSMA to seek legislation to provide liability coverage to qualified retired physicians willing to donate their time to care for the indigent; care to be provided on a special retired license
29.	mini-internships	WVSMA to encourage their development at the county level; to make use of AMA's model programs as a means of developing better understanding of physicians
32.	pediatric rehabilitation facilities	WVSMA to support development of such a facility in the state
33.	third-party insurance carriers	WVSMA ad hoc committee to study problem of physicians' offices obtaining prompt responses to administrative questions; committee to provide at least a preliminary report to Council within six months
34.	scope of activity of PRO decisions, quality of physician reviews, and rotation of physicians as reviewers	WVSMA to request West Virginia Medical Institute to provide program to define scope of activity of PRO decisions in state; request WVMI to improve quality of physican reviews; request WVMI consider a plan of rotation for all physicians to serve as reviewers
36.	endorsed liability insurance carrier	Council, through Insurance Committee, shall explore ways in which endorsed insurance agent might be replaced to advantage of Association; to explore ways in which insurance of all types might continue to be provided to members
37.	information session by Legislative Committee during Mid-Winter Clinical Conference	Legislative Committee to present informational session during Mid-Winter Clinical Conference to apprise membership of legislative activity
39.	WVSMA support of organized nursing	to support nursing in state in continuing to develop and expand existing nursing training and re-entry programs to alleviate the shortage of bedside care; to communicate this resolution to AMA
40.	WVSMA Executive Director	WVSMA search committee established to locate candidates for position of WVSMA Executive Director
42.	(referred to Legislative Committee and to Joint Committee as established by Resolution No. 2) creation of body to address provision of health care in West Virginia	Council would create a mechanism by which health care needs can be addressed and solutions proposed; Council would petition Governor to create body to find solutions using as a resource the Health Care Policy Agenda for the American People published by the AMA Board of Trustees
43.	designation of West Virginia hospitals as "smoke-free" areas	to ask West Virginia Hospital Association to join WVSMA in effort to designate every West Virginia hospital as a "smoke-free" area; to encourage all state physicians to do the same thing in their offices
44.	(referred to Legislative Committee) support for passage of the West Virginia Ground Water Protection Act in the 1990 legislative session	WVSMA would support the Act (HB-2200) which will be proposed again in the next session of the Legislature

Teen Pregnancy, Heart '90 Topics

Tolliver

Touchon

Adolescent pregnancy in West Virginia and contemporary treatment of congestive heart failure will be two of the subjects covered during the 23rd Mid-Winter Clinical Conference next January 26-28.

The weekend CME event, to be held in Charleston at the Holiday Inn Charleston House, will begin Friday afternoon and continue through Sunday morning until noon.

Nancy J. Tolliver of Charleston, Director, Office of Community Health Services, West Virginia Department of Health and Human Resources, Division of Health, will discuss adolescent pregnancy in the state during the Friday afternoon session on adolescent health.

The congestive heart failure lecture will be given during the Saturday morning session, a potpourri of topics, by Robert C. Touchon, M.D., Professor of Medicine and Physiology, Marshall University School of Medicine.

Legislative Reception

A reception for members of the West Virginia Legislature is being planned for 6-7 P.M. Thursday, January 25, preceding the opening of the conference.

Other speakers for the opening Friday afternoon session will cover health maintenance (weight, smoking, blood pressure, diet, cholesterol), eating disorders, drugs/alcohol, and sexually transmitted diseases in West Virginia.

(Continued next page)

(Continued from page 443)

Other Saturday morning topics will include laser overview, chest x-rays, mammography, and asbestosis.

Scheduled for the Saturday afternoon session on immunology update are childhood and adult immunizations, desensitization, drug therapy, and tests (ANA, SED rate, ect.)

Normal physiology of aging will be the first talk for the aging process session Sunday morning, with other papers to cover pharmacology, nutrition, and injuries: treatment of falls.

Plans are incomplete for the traditional Friday evening Physicians' Session. Poisons and toxic threats in the home environment will be discussed at the concurrent Public Session.

Women's Center Director

Before assuming her present position in 1987, Tolliver had been Executive Director of the Women's Health Center of West Virginia in Charleston since 1975.

She began her career as a registered nurse with Charleston Area Medical Center, Memorial Division.

Tolliver has held a number of professional and volunteer positions relating to pregnancy and childbirth including those as a member of the West Virginia Governor's Task Force on Children, Youth and Families Advisory Task Force; Inanna Fund for West Virginia Women, Inc.; Southern Strategic Planning Group on Adolescent Pregnancy Prevention, and Robert Wood Johnson Foundation "Healthy Futures," a project to reduce infant mortality in West Virginia.

In 1987-88 she was Chief Investigating Officer, Pregnancy Risk Assessment Monitoring Surveillance Project, Centers for Disease Cooperative Agreement.

Tolliver received a B.S. degree from West Virginia State College and an M.S. degree in industrial relations from the College of Business and Management, College of Graduate Studies, Institute.

Cardiovascular, Other Posts

At Marshall, Doctor Touchon also is Chief, Cardiovascular Medicine; Director of Adult Cardiovascular Training Program, and Director, Preventive Cardiology Program.

He also serves as Chief of Cardiology at the Huntington Veterans Administration Medical Center, and Director of Cardiac Rehabilitation, Cabell Huntington Hospital.

Doctor Touchon was recipient of the Preventive Cardiology Academic Award, National Heart Lung and Blood Institute, National Institute of Health, 1988-1993, and was named Clinical Teacher of the Year at MU School of Medicine in 1985-88.

He was graduated from Occidental College in Los Angeles, and earned his M.D. degree in 1965 from Saint Louis University. He received his postdoctoral education at Santa Barbara General/Cottage Hospitals in Santa Barbara, California; University of Pennsylvania; as a clinical cardiology fellow at Saint Vincent Hospital in Los Angeles, and as a cardiology research fellow at the University of California Los Angeles.

His current research includes: cardiovascular risk factor modification and atherosclerotic regression using a quantitative coronary angiogrpahic model; synchronized coronary venous retroperfusion in acute ischemic syndromes, and positive inotropic pharmacotherapy in chronic congestive heart failure, a long-term survival study.

Program Committee

Members of the Program Committee are Drs. William O. McMillan, Jr., Chairman, Charleston; James L. Comerci, Wheeling; Gerald T. Golden, Martinsburg; George W. Hogshead, Nitro; Maurice A. Mufson, Huntington; Joseph T. Skaggs, Charleston; Richard G. Starr, Beckley; John W. Traubert, Morgantown, and C. Carl Tully, South Charleston.

Ex officio members are Ernest W. Chick, M.D., Marshall University CME; Sharon A. Hall, Charleston Area Medical Center CE, and Pat Penn, West Virginia University CME.

Speakers and additional program information will appear in upcoming issues of the *Journal*.

Members, Staff Just Say 'Mary'

CUSTER B. HOLLIDAY
Managing Editor

For the majority of physicians in West Virginia, all you have to do is say "Mary" when you're talking about WVSMA headquarters, and they'll know who you mean.

It's hard for both headquarters staff and doctors to believe that that's not exactly true any longer.

Mrs. Mary Hamilton, Executive Assistant at WVSMA headquarters, retired September 30 after 35 years of service.

Mary likes to reminisce about her first days with the Association as a young secretary who had moved to Charleston from her home town of Logan. She likes to talk about the many doctors who helped her and gave her good advice as she adjusted to her early career.

As Young Secretary

She also remembers how apprehensive she was when she travelled to the Greenbrier for her first Annual Meeting as that young secretary. Little did she realize that she would become a familiar personality to the Greenbrier staff as she went on to handle many of the important arrangements for the WVSMA conventions over the years.

Mary was presented a plaque in appreciation of her long and outstanding service by WVSMA officers and members at the 122nd Annual Meeting in August during the first session of the House of Delegates August 16.

As most state doctors realize, Mary has accomplished much more than handling the important arrangements for the convention as officers and members, year in and year out, called on her more and more for information and assistance.

In addition to the plaque, a resolution commending her upon her retirement for her many achievements was adopted unanimously by the House during the first session.

To cap it off, WVSMA is providing Mary and her husband,

Mrs. Mary W. Hamilton, WVSMA Executive Assistant, holds the WVSMA plaque commending her for outstanding service upon her retirement September 30.

Keith, with a trip, the details of which haven't been worked out.

Her plans for the future? "We'd like to go to Florida for three or four months this winter, but not until after Christmas so we can spend Christmas with Josh (grandson). I thought I would like to get into some volunteer work at Thomas (Thomas Memorial, South Charleston) or one of the other hospitals, and I would like for Keith and I to get into an exercise regimen."

Text of Resolution

The text of the resolution follows:

"WHEREAS, Mrs. Mary W. Hamilton, Executive Assistant of the West Virginia State Medical Association, has been a highly-valued employee for 35 years, and

"WHEREAS, Mrs. Hamilton will retire September 30, 1989, and

"WHEREAS, Mrs. Hamilton started with the WVSMA as a secretary in 1949, and (with a five-year absence following the birth of her son in 1953) rose to her present position through ability and conscientious performance of duties, and

"WHEREAS, Mrs. Hamilton has demonstrated her loyalty to the physicians of West Virginia, and

"WHEREAS, she has worked under four executive directors, and

"WHEREAS, in addition to the position of secretary, she also has served as bookkeeper, *Journal* advertising manager, program coordinator for the Annual Meeting and Mid-Winter Clinical Conference, exhibits coordinator, Continuing Medical Education Accreditation Coordinator—plus many other special assignments, and

"WHEREAS, her reputation for knowledge of, and regard for, the Association and its operations is recognized by physicians throughout West Virginia, therefore be it

"RESOLVED, that the West Virginia State Medical Association, by this resolution, officially express its gratitude to Mrs. Hamilton for her long and outstanding service, and its admiration of her capabilities and accomplishments, and be it further

"RESOLVED, that notification of the approval of this resolution be communicated to her husband, Keith; son, Larry; co-workers, friends and associates.

Fall Legislative Events Planned

The WVSMA Auxiliary is working with the county medical societies in planning fall legislative dinners, receptions or events as requested by WESPAC, the West Virginia Medical Political Action Committee. At the Annual Meeting, WESPAC acted on a motion and the Auxiliary agreed to offer their assistance in planning and coordinating legislative gatherings. In some counties these events are annually done with the Auxiliary's involvement. In most cases, the events are joint medical/auxiliary meetings over dinner with invited legislators, both senators and delegates, from the county districts. October has been identified as the key month to schedule the meetings, but early November plans, before the holidays, are considered an opportune time.

The WVSMA would like to be notified about the date of the event, for it is possible that members of the Executive Committee and Council may be available to attend. Not every county medical society has an auxiliary chapter, so some counties would not have the benefit of their help. If your county is in need of assistance and advice in planning such an event, please contact Dee Crabtree of the WVSMA staff.

Thomas P. Long, M.D., Man (left), and Roger E. Bryant, Logan, received special awards during the WVSMA convention in August. Doctor Long displays the A. H. Robins Company Physician Award for Community Service, and Bryant holds the Presidential Citation, which recognizes contributions to health care by West Virginia lay citizens.

Logan Countians Capture 1989 WVSMA Service Awards

A Man family physician and the Executive Director of the Logan County Emergency Ambulance Service Authority received special WVSMA awards during the Association's Annual Meeting in August.

Thomas P. Long, M.D., who was nominated by the Logan County Medical Society as a man who "exemplifies the dedicated physician," was presented the A. H. Robins Company Physician Award for Community Service.

Roger Elmo Bryant of Logan, also nominated by the Logan County Medical Society for his achievements in emergency medical services in the county, was given the WVSMA Presidental Citation, an award recognizing contributions to health care by West Virginia lay citizens.

Doctor Long, in addition to the many organizations and activities to which he devotes his attention, has found time to provide free physical examinations to all football players at Man High School for the last 32 years. He also has provided similar services at Man Junior High School.

A past President of the West Virginia Chapter, American Academy of Family Physicians, Doctor Long was presented the "Distinguished West Virginian" Award by former Governor Arch A. Moore, Jr., for his community and state contributions.

He also received a Certificate of Appreciation from former President Gerald R. Ford in recognition of his Selective Service efforts.

Doctor Long, a native of Monroe County, was graduated from West Virginia Wesleyan College in 1949, and received his M.D. degree in 1954 from the Medical College of Virginia.

Involved Since Inception

Bryant has been involved with the Logan County Emergency Ambulance Service Authority since its inception in 1979—as paramedic, director, teacher, and contractor (the ambulance facilities are of his design and construction).

"He has worked tirelessly to organize a county-wide, comprehensive pre-hospital emergency system now employing 45 with 24 volunteers and an annual budget in excess of $1.2 million," said the Logan County Medical Society.

Bryant also has helped plan, organize and manage various regional and state EMS programs, and has worked with the state government in drafting and having approved our present EMS laws, rules and regulations.

The versatile Bryant, a graduate of Marshall University, is an accomplished professional singer and a former Logan County public school teacher and heavy construction equipment operator.

He has received a number of community service awards from organizations in the Logan area.

Library Software Demonstrations

Demonstrations of the National Library of Medicine's GRATEFUL MED user friendly software package are scheduled this fall: Preston Memorial Hospital, Kingwood (Oct.12), WVU Health Sciences Center, Morgantown (Oct. 13), Wetzel County Hospital, New Martinsville (Oct. 19), United Hospital Center, Clarksburg (Nov. 6), and Ohio Valley Medical Center, Wheeling (Nov. 16).

GRATEFUL MED is designed to simplify literature searches on MEDLINE and other NLM data bases.

The demonstrations by West Virginia Consult are being held to alert state physicians, especially those in the rural environment, about how user friendly GRATEFUL MED can help them to search the medical literature easily and practically.

For Pre-registration deadlines or to schedule a demonstration at your hospital, contact Linda Jacknowitz, CONSULT's Project Director, at 293-2502.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Judith A. Bradle, Program Manager, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Bradle, (304) 347-1363; and Hall, (304) 348-9580.

CAMC/WVU-Charleston Division

Oct. 20, William B. Rossman Symposium (Highland Hospital)

Oct. 26, A Physician's Perspective of the Canadian Health Care Delivery System (6-9 P.M., Guest Dinner Lecture)

Oct. 27, Complications in the Transplant Patient (8 A.M.-5 P.M.)

Nov. 8, Faculty Research Day

West Virginia University, Morgantown

Oct. 5-7, Pediatrics Oktoberfest

Oct. 6-7, Gearing Up for Senior Care in the Year 2000*

Oct. 19-21, 15th Annual Hal Wanger Family Medicine Conference*

Nov. 11, Women's Health Issues*

Nov. 17-19, Hypnosis Workshop

*In conjunction with WVU football games

CME Outreach Programs

Key to Sponsors

★ WVU Health Sciences Center, Morgantown

☐ WVU Health Sciences Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Brownsville, PA, ★ General Hospital, 11 A.M.—Oct. (tba)

Cabin Creek, ☐ Cabin Creek Medical Center, 8:30 A.M.—Oct. 12, Rehabilitation of the Stroke Patient, Kenneth Wright, M.D.

Fairmont, ★ Fairmont Clinic, Noon—Oct. (tba)

Fairmont, ★ General Hospital, 7:30 A.M.—Oct. (tba)

Gassaway, ☐ Braxton County Memorial Hospital, 6:30 P.M.—Oct. 4, Treatment of Diabetic Foot, Dan Foster, M.D.

Grantsville, • Calhoun General Hospital, 1:30 P.M.—Oct. 9, BSI Update, Terrie Lee, R.N., B.S.N.

Hurricane, • Putnam General Hospital, 7 P.M.—Oct. 19, Diabetic Retinopathy, Mark Hatfield, M.D.

Logan, • Logan General Hospital, 11:30 A.M.—Oct. 20, Update on Fibrocystic Disease, G. Cendana, M.D.

Madison, ☐ Boone Memorial Hospital, 6:30 P.M.—Oct. 10, Quality Assurance, Becky Fain, M.S.N., C.P.Q.A.

Man, • Appalachian Regional Hospital, 7 P.M.—Oct. 17 (tba)

Martinsburg, ★ V.A. Medical Center, 3 P.M.—Oct. (tba)

Montgomery, • General Hospital, 12 P.M.—Oct. 4, Angioplasty Update, Ganpat Thakker, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Oct. 19, Symptoms of Alcohol/Drug Abuse in the Adolescent, Rollynn Sullivan, M.D.

Oak Hill, ☐ Plateau Medical Center, 7:30 P.M.—Update Lab Practices, Bobby Caldwell, M.D.

Parkersburg, ★ Camden-Clark Hospital, 7 A.M.—Oct. 11, Osteoporosis, Gregory Kujala, M.D.

Petersburg, ★ Grant Co. Memorial Hospital, Noon—Oct. 26, Recent Developments in Anti-Epileptic Therapy, Alvaro Cuticrrcz, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Oct. 13, Liposuction Update, Hans Lee, M.D.

South Williamson, • Appalachian Regional Hospital, 5:30 P.M. Oct. 26, Trauma Update, James Kessel, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Oct. 17, New Management of Prostate Cancer, Sam Oliver, M.D.

Summersville, ☐ Summersville Memorial Hospital, 6 P.M.—Oct. 3, Quality Assurance, Becky Fain, M.S.N., C.P.Q.A.

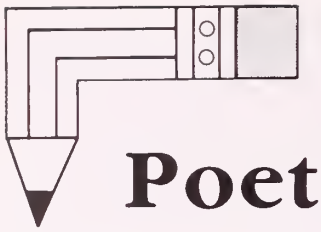
Waynesburg, PA, ★ Greene County Memorial Hospital, 7 A.M.—Oct. (tba)

Weston, ★ Stonewall Jackson Hospital, 6:30 P.M.—Oct. (tba)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Oct. 25, Quality Assurance, Becky Fain, M.S.N., C.P.Q.A.

White Sulphur Springs, ☐ Greenbrier Clinic, 4 P.M.—Oct. 17, Panic Disorders, Tom Ellis, M.D.

Williamson, ☐ Williamson Memorial Hospital, 6:30 P.M.—Oct. 19, Red Eye: Basic Causes, Diagnosis & Treatment, Richard C. Rashid, M.D.



Poetry Corner

To My Unborn Grandchild

I know you so well
Yet not at all.
She, that big she
Whose beat of her heart
Lub-dub

Nourishes you,
Who keeps you warm
And talks to you at night,
Lub-dub

Who jiggles you
When she jogs,
I know her
Lub-dub

She'll be stern,
But her bark
Worse than bite.
Lub-dub

Underneath she's soft,
She thinks
I was too easy
Lub-dub

With her
And her sister
Your aunt,
Lub-dub

Especially your aunt.
Being stern
She'll want you
Lub-dub

To toe the mark,
But just wait
'Til she sees
Lub-dub

Those brown eyes
And crooked smile,
She'll melt
Lub-dub

Just as I did,
Twenty-six years
Ago.
Lub-dub

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

Heartbeats

Just keep it simple and tune up
placental
dim sounds of assurance.
With drum roll and fanfare proceed
then without care
certain that you're number one.
Three, four close the door, Five, six
pick up sticks.

For once and for all heed the
rhythmic cadence of multiplication.
Those tables that lead to the
marvelous notion that numbers are
certain.
If one and one are two, I'll try this
dance with you.

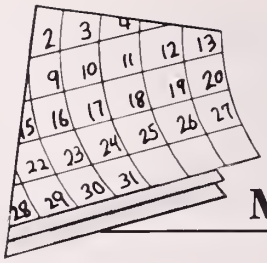
When quartz watches tremble,
vibrations resemble an earthquake
in terror.
Unknowns or forgottens, such
nightmares, remember court critical
error.
Let's set our watches men and hope
we meet again.

The cosmos is ticking while we sit
here knitting like Madame LaFarge.
Accountants are needed to for-
malize meetings or universe
leavings.
Knit one, pearl two, megaknit, the
whales too?

Maturity buys sweet security - -maybe
the other way round.
What matters the pulse rate, as long
as we're not late rewards will
abound.
One, two, three, four who are we
for?

In cares final irony victory occurs
as certainty enters - -
When life damps its embers.
Hi diddle. Hi Dumpty. You see.

Stephen D. Ward, M.D.
Wheeling



Medical Meetings

October

4-5—National Political Education Conference, Washington, D.C.

5-6—Am. Academy of Pediatrics, Atlanta.

15-20—Am. College of Surgeons, Atlanta.

18-21—Am. Academy of Clinical Psychiatrists, St. Louis.

19-21—Hal Wanger Family Practice Conference, Morgantown.

19-22—Am. Society of Internal Medicine, Washington, D.C.

20-21—Office Managers Assoc. of Health Care Providers, Beckley.

20—Highland Hospital William B. Rossman Symposium, Charleston.

30-Nov. 3—Am. College of Chest Physicians, Boston.

November

3-4—Am. Academy of Pain Medicine, Dallas.

4—Eye & Ear Laser Surgery Seminar VI, Eye & Ear Clinic of Charleston, Inc., Charleston.

4—AMPAC Candidates Workshop, St. Louis.

5-8—Southern Medical Assoc., Washington, D.C.

12-17—AMPAC Campaign Management School, Washington, D.C.

17-19—WV Chapter, Am. Academy of Family Physicians 3rd Annual Family Practice Weekend & Sports Medicine Conference, Huntington.

December

3-6—AMA Interim Meeting, Honolulu.

1990

January

11-13—Southern Section, Am. Laryngological, Rhinological & Otological Society, Inc., White Sulphur Springs.

26-28—WVSMA 23rd Mid-Winter Clinical Conference, Charleston.

28-31—Southeastern Surgical Conference, Naples, Fla.

February

14-18—Am. College pf Psychiatrists, Palm Springs, Calif.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

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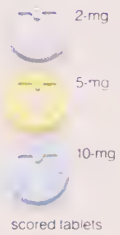

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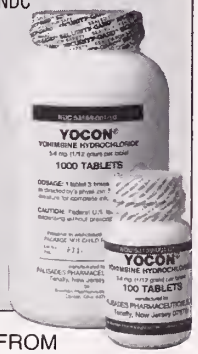

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1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Eye Center Reflects Reorganization

University Eye Center is the new name for the comprehensive and specialized services provided by the Department of Ophthalmology.

The name change also reflects a reorganization within the Department to improve the clinical, educational and research services and make them more efficient and centralized, according to Judie F. Charlton, who joined the faculty as the first Director of Clinical Services.

Doctor Charlton coordinates the activities of all the Eye Center patient care facilities. Comprehensive eye care is available at the Eye Clinic at the WVU Health Services Center, and specialized services are available at Hampton Center. Early in 1990, all services will be consolidated in the new UHA Ambulatory Care Center.

Services

Services include eye examinations for glasses and contact lenses; neuro-ophthalmology; pediatric eye care; glaucoma therapy; cataract surgery; eyelid and orbital surgery; corneal surgery; retina and vitreous surgery; laser therapy; and visual rehabilitation and low vision aids.

"One of our main goals is to make sure that services provided at the University Eye Care Center are both affordable and easily accessible to patients," Doctor Charlton said.

"We are now offering evening hours and expanding our contact lens services to provide different types of lenses and to help with complex lens problems.

"We're also expanding our low-vision rehabilitation services for people with problems that cannot be corrected completely with glasses or surgery. We teach them to use magnifiers or other low-vision aids . . ."

Charleston Panic Disorder Clinic

A woman wakes up in the middle of the night in a cold sweat. Her heart is racing. She is frightened and tense. She doesn't know why.

A shopper in a large department store feels a sudden rush of anxiety and hurries outside, leaving her shopping cart full of groceries.

An elderly woman hasn't left her neighborhood in months because of a terror she feels when she ventures more than a few blocks away.

These people are suffering from extreme, unwarranted anxiety that may be symptomatic of what is known as panic disorder.

To help people with the increasingly common problem, the Charleston Division of the Department of Behavioral Medicine and Psychiatry of WVU Health Sciences Center has established a Panic Disorder Clinic.

"Panic disorder is characterized by repeat, brief periods of intense anxiety interspersed with worry or fear that another attack may occur," said psychiatrist Veena Bhanot, Co-Director.

Symptoms of these attacks vary from person to person and may include racing heart, chest pain, difficulty in breathing, a choking sensation, dizziness, numbness, weakness, sweating and nausea.

Leading Reason

Psychological symptoms may also be present, including feelings of unreality and intense fear of losing control, going carzy or dying.

"People in the grip of a panic attack are convinced that the worst is about to happen," said psychologist Thomas Ellis, Co-Director.

Doctor Ellis said panic disorder has become one of the leading reasons people seek psychological help. It is number one among women and number two among men.

Up to 40 per cent of people who consult cardiologists actually suffer from panic disorder. They don't realize that their heart palpitations and chest pains are due to anxiety.

Studies show that about one third of the general populaion has had at least one panic attack in the past year. Some two million Americans are thought to have diagnosable panic disorder.

"Unfortunately, an estimated 75 per cent of these are never diagnosed," said Doctor Ellis.

Patient-Controlled Pain Medication

In the past, when patients in the hospital needed pain medicine, they rang for a nurse.

At Ruby Memorial Hospital, instead of calling a nurse, patients push a button on a special machine and receive a precise intravenous dose of pain medication prescribed by their doctor.

Patient-controlled analgesia (PCA) is becoming popular in many hospitals because it puts patients in control of their pain and it saves both time and money.

Anne Hacket, M.D., an anesthesiologist at WVU Health Sciences Center, began using PCA at Ruby Memorial this spring after using it for several years in private practice.

"Almost all of my patients say they like the control they have with the PCA infuser," she said. "They don't have to rely on someone else to get the pain medicine for them or to decide if they actually have pain.

"If they ring for a nurse, she may be busy with other patients and not able to come for several minutes. Then she needs to assess the patient's need for pain medication. After that, she has to get the keys, go to the narcotics cabinet, draw up the correct dosage, and then come back and administer the injection. All this time, the patient may be lying there in pain."

With PCA, the patient decides if the pain is severe enough to require medication and, if so, receives it instantly.

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MU School Of Medicine News

MARSHALL UNIVERSITY

Compiled from material furnished by the Office of University Relations, Marshall University.

China's Technology Level Like 1950s

In China there are three knives, Dr. Gary Rankin and his colleagues were told at the American Embassy in Beijing earlier this year.

There is the surgeon's knife, representing medicine. There is the butcher's knife, which represents the shopkeeper. And there is the melon-cutter's knife, which represents those who can sell part of their goods on the free market.

"In China, you don't want to hold the surgeon's knife," the scientists were told.

In their 17-day visit, Doctor Rankin and his colleagues saw carry overs of the Cultural Revolution's repression of intellectual activity. They learned, for example, that their tour guide made more than the average college professor.

Doctor Rankin, Chairman of Marshall's Pharmacology Department, was part of a scientific delegation sponsored by People to People International. Its members visited medical schools in Beijing, Shanghai and Hong Kong, making presentations on their own research activities and interacting with Chinese scientists.

Medicine Factory Massive

Doctor Rankin was particularly interested in a visit to a traditional medicine factory in the city of Xian.

"It's similar to our herbal medicine," he said. "But whereas in the U.S. we've approached folk medicine by grinding the plant and making it into a tea or salve, they have built factories to take massive quantities of plants, extract what they believe is the active ingredient, make them up in combination and market the drugs."

Unlike narrowly focused Western medications, the Chinese herbal drugs are billed as treating a wide variety of conditions. One medication, for example, was advertised as treating both amnesia and lumbago; another was considered useful as an expectorant and kidney tonic.

"The thing that bothered us was the lack of quality control," said Doctor Rankin. "I don't doubt that herbs can work, but when you boil up massive quantities of them and don't do mass testing, then you have no guarantee that they work.

"They would analyze each medicine for two compounds, even though it might contain 25 or 30," he said. "I asked how they knew each batch of medicine was active, and they answered 'They have been active for a thousand years.' "

The overall level of technology compares to that found in the U.S. in the 1950s, he said. The hospitals, the group found, were grim and depressing. Of particular concern was the use of outdated drugs, including some that Western medicine has rejected as too toxic.

The overall experience was broadening, Doctor Rankin said. "I gained five years' experience in 17 days," he said.

Artist Adele Thornton Lewis, left, and Mrs. Robert W. (Judy) Coon, unveil Doctor Coon's portrait, which will hang in the MU School of Medicine education building, which bears his name. (See story below.)

Former Dean Coon's Portrait Unveiled

Alumni of the School of Medicine looked to both the past and future in their third annual Alumni Weekend in September. A highlight of the weekend was the unveiling of a portrait, commissioned by the School's first graduating class, of former Dean Robert W. Coon, M.D. The portrait will hang in the school's medical education building, which bears his name. Doctor Coon also was named Dean Emeritus of the school by Marshall President Dale Nitzschke, who observed that although Doctor Coon was not technically the school's first Dean, he was in the truest sense of the word its founding Dean.

More than 200 people attended the Alumni Weekend, which also included CME and grand rounds presentations from five School of Medicine alumni, faculty physicians from both Marshall and WVU, and George Irons, M.D., of the Mayo Clinic. William Neal, Jr., M.D., of WVU was the featured luncheon speaker, and also made a presentation on pediatric cardiology.

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WESPAC Members

Listed below are additional 1989 WESPAC members reported to the *Journal* since those published in the September issue. New WESPAC members will be reported next month.

Cabell
*Gary G. Gilbert
William M. Jennings III
Philip B. Lepanto
Joye A. Martin
Tara C. Sharma
Philip R. Stevens
Mabel M. Stevenson
*Gary M. Tolley
Charles L. Yarbrough

Central WV
Alfred J. Magee
*Joseph A. Snead

Eastern Panhandle
Roger Rizzardi

Greenbrier Valley
Haven N. Wall, Jr.

Harrison
*John J. Crossen
Robert D. Hess
*M. V. Kalaycioglu
Douglas E. McKinney
*Catalino B. Mendoza, Jr.

Kanawha
Mohammed M. Boustany
Jan H. Cunningham
Thomas J. Janicki
*Sriramloo Kesari
*John B. Markey
L. M. Minardi
*William C Morgan, Jr.
Carl J. Roncaglione
Ujjal S. Sandhu
Samuel A. Strickland
Edward H. Tiley III
George E. Toma
A. Don Wolff
Kenneth C. Wright
George L. Zaldivar

Mercer
*David F. Bell, Jr.

Monongalia
*Gary D. Marano

Ohio
Regina M. Barberia
Vilja K. Stein
Sam Vukelich

Parkersburg
P. L. Wiebe

Raleigh
*Mohammed K. Hasan

Western
Pedro N. Ambrosio
Erlinda Ambrosio

Auxiliary

Cabell
Diane G. Fornari

Harrison
Alice Jo Hess
Lydia L. Lazaro

Kanawha
*Mrs. Edward R. Wheatley
**Sustainer Member*

Necrology Report

The following is a list of West Virginia physicians whose deaths have been reported to the West Virginia State Medical Association during the past year:

1988

Apr. 8 — Hugh S. Edwards
Beckley

Aug. 18 — David L. Ealy
Moundsville

Sept. 11 — Lawrence H. Mills
Clarksburg

Oct. 7 — Newman H. Dyer
Princeton

Oct. 16 — Claude S. Lawson, Jr.
New Port Richey, FL

Oct. 24 — Edwin M. Shepherd
Charleston

Nov. 12 — French R. Miller
Morgantown

Dec. 9 — John R. Hatfield, Sr.
Princeton

1989

Jan. 3 — Victor S. Skaff
Charleston

Jan. 4 — Grover C. Hedrick, Jr.
Beckley

Jan. 8 — Charles L. Leonard
Elkins

Feb. 19 — George W. Easley
Morgantown

Mar. 25 — Robert A. Marks
Clarksburg

May 11 — Paul C. Soulsby
St. Albans

May 12 — Jack Basman
Charleston

May 18 — William A. Cracraft
Charleston

Respectfully submitted,
George Rider
Interim Executive Director

August 16, 1989
White Sulphur Springs, WV

Obituary

ROBERT H. SKAFF, M.D.

Dr. Robert H. Skaff of Charleston died Sepember 8 in a hospital there. He was 56.

Doctor Skaff was a family physician with an office in Poca.

He was graduated from West Virginia University, and received his M.D. degree in 1958 from George Washington Uiversity. He interned at Providence Hospital in Washington, DC, and then spent two years with the U.S. Public Health Service there.

Doctor Skaff was a member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving are the wife, Mrs. Pauline Cassis Skaff; a daughter, Dr. Leann Skaff of Tampa, Florida, and a brother, Michael Skaff of Jackson, Michigan.

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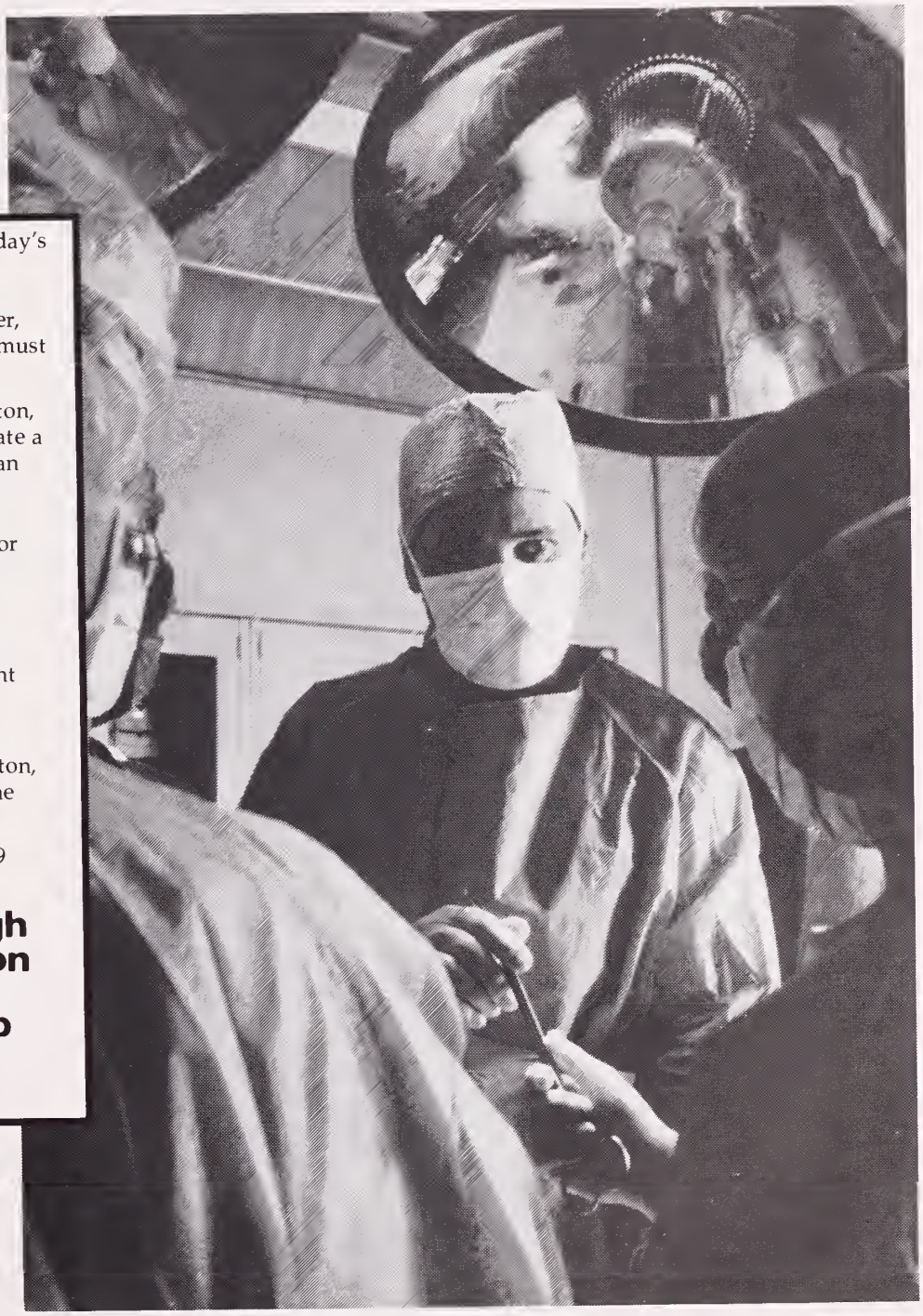

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Resolutions

The following resolutions were acted upon by the House of Delegates during the August 16-19, 1989, Annual Meeting of the West Virginia State Medical Association in White Sulphur Springs at the Greenbrier.

1. Adopted was the following substitute for Resolution No. 1, pertaining to unified membership and presented by Harrison County Medical Society:

WHEREAS, strong medical organization is beneficial to all physician and patients by providing a forum to monitor and influence the evolution of health care; and
WHEREAS, all physicians benefit from the efforts of those physicians who do support organized medicine at each level (local, state, AMA); and
WHEREAS, the political, socioeconomic, and legal forces that are impacting, changing, and restricting medical practice demand a more unified voice by the the medical profession; be it therefore
RESOLVED, that an ad hoc committee be appointed to study and evaluate the concept of a unified membership and submit a report to Council by the 1990 Annual Meeting."

---

2. Adopted was the following substitute for Resolution No. 2, pertaining to formation of a joint committee and presented by the Kanawha Medical Society:

"WHEREAS, the people of the State of West Virginia expect and deserve a level of health care that is available to the citizens of any other state; and

"WHEREAS, the State of West Virginia has a lower physician-to-patient ratio than the national average; and

"WHEREAS, this imbalance causes difficulties for both the consumers and the providers of health care services; therefore be it
RESOLVED, that the WVSMA seek the creation of a joint committee composed of members of departments of state government, the Legislature and health care providers which will study and propose legislation, the ultimate purpose of which is to facilitate methods and mechanisms for improving the health care of all West Virginians."

---

3. Adopted was the following substitute for Resolution No. 3, pertaining to state-provided medical liability insurance for physicians as presented by the Kanawha Medical Society:

"WHEREAS, the State of West Virginia has recognized the need to encourage the provision of obstetric services to Medicaid patients by the provision of medical liability coverage for such services; and
"WHEREAS, there is an equivalent need to encourage the provision of all types of medical services to Medicaid patients; therefore be it
RESOLVED, that the Legislature enact legislation requiring the Board of Risk and Insurance Management to provide similar medical liability coverage to all physicians who provide medical services of any nature to Medicaid patients."

---

4. Adopted was the following substitute for Resolution No. 4, pertaining to repeal of the 1989 Omnibus Health Care Act as presented by the Kanawha Medical Society:

"WHEREAS, the West Virginia State Medical Association recognized the necessity for cost containment in West Virginia state-funded medical programs; and

"WHEREAS, the present legislation discourages the physician particpation in health care to segments of our population, i.e. "take one, take all;" and

"WHEREAS, a shortage of physicians exists in certain areas of the state; be it
RESOLVED, that the WVSMA work for the repeal of the Omnibus Health Care Act and, be it further
RESOLVED, that the Association support legislators who will work for its repeal."

---

5. Adopted was the following substitute for Resolution No. 5, pertaining to guidelines for alcohol and drunk driving laws as presented by the Kanawha Medical Society:

"WHEREAS, alcohol and specifically drunk driving are a leading cause of death, injury and dismemberment in this country; and WHEREAS, the former Surgeon General, C. Everett Koop, has taken a stand against alcohol, therefore be it RESOLVED, that the West Virginia State Medical Association encourage the West Virginia State Legislature to follow the guidelines for alcohol and drunk driving laws set forth by the Surgeon General."

---

6. Adopted as presented by Kanawha Medical Society was Resolution No. 6, pertaining to mandatory seat belt law:

"WHEREAS, seat belt usage has been shown unequivocally to save lives; and
WHEREAS, seat belts are shown to be cost effective; and
WHEREAS, each year in this state over 400 citizens' lives are lost at an untold cost in dollars and suffering, therefore be it
RESOLVED, that the WVSMA maintain its position of supporting the passage of a mandatory seat belt law and continue working to that end on a priority basis."

---

7. Adopted was the following substitute for Resolution No. 7, pertaining to WVSMA spokesperson and presented by Kanawha Medical Society:

"RESOLVED, that the WVSMA spokesperson shall be the President of the Association or his designee, and be it further
RESOLVED, that this person, in expressing any public statement, clearly indicate whether his or her opinion represents the opinion of the Association or of that person individually."

---

8. Adopted was the following substitute for Resolution No. 8., pertaining to regular financial audits

for each component society and offered by Kanawha Medical Society:

"WHEREAS, it is prudent business; and
WHEREAS, each component medical society has a fiduciary responsiblility to its membership, therefore be it
RESOLVED, that the WVSMA study the feasibility of providing a financial audit and dues billing service to the component societies and to consider the feasibility of requiring all employees and those officers responsible for fiduciary matters to be bonded."

---

9. Adopted was the following substitute for Resolution No. 9, pertaining to WVSMA Committee on Health and Well-Being and presented by Kanawha Medical Society:

"WHEREAS, during the last session of the Legislature, for many reasons, no legislation was passed dealing with the impaired physician; and
WHEREAS, we feel relief is necessary in this area to allow physicians and other health providers to seek care for substance abuse without publicity, therefore be it
RESOLVED, that the WVSMA instruct its Committee on Health and Well-Being to work with the Board of Medicine and legislative leaders to resolve this problem."

---

10. Adopted was the following substitute for Resolution No. 10, pertaining to a community relations department (WVSMA) and presented by the Mercer County Medical Society:

"WHEREAS, it is apparent that the general public does not fully understand the role of the physician in the community and as a health care provider, therefore be it
RESOLVED, that the Council investigate the costs and benefits of establishing a community relations department within the Association."

---

11. Adopted was the following substitute for Resolution No. 11, pertaining to WVSMA funds supporting PMCN and presented by the Mercer County Medical Society:

"WHEREAS, the West Virginia State Medical Association (WVSMA) has supported the Preferred Medical Care Network of WV (PMCN) with significant funding both during start-up and again in 1989; and
WHEREAS, any benefits from the expenditure of these funds shall accrue only to members of the PMCN; and
WHEREAS, the PMCN is a separate and distinct organization from the WVSMA, therefore be it
RESOLVED, that the WVSMA take appropriate steps to assure that any funds advanced to PMCN will be repaid and no further funds be advanced."

---

12. Adopted was the following substitute for Resolution No. 12, pertaining to establishment of a rapid communication network within the WVSMA and presented by the Mercer County Medical Society:

"WHEREAS, recent problems dealing with legislative activities highlighted the need for a rapid communications network within the Association, therefore be it
RESOLVED, that a communications network be developed that permits the rapid dissemination of information throughout the Association."

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13. (Resolution No. 13, pertaining to a WVSMA membership directory and presented by Mercer County Medical Society, was not adopted at the recommendation of the Resolutions Committee as the directory will be distributed in the near future.)

14.-15. (Resolutions Nos. 14 and 15 were withdrawn by the Mercer County Medical Society.)

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16. (Resolution No. 16, pertaining to donations to political campaigns and presented by Mercer County Medical Society, was not adopted at the recommendation of the Resolutions Committee because it duplicates the role of WESPAC.)

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17. (Resolution No. 17, pertaining to negotiations with CNA Insurance Company/PMCN and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolutions Committee as it contains two unrelated issues.)

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18. (Resolution No. 18, pertaining to provision of insurance by WVSMA and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolutions Committee as this coverage already exists.)

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19. (Resolution No. 19, pertaining to private health insurance/ policies of PEIA and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolutions Committee as the intent is well understood but impractical.)

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20. Adopted was the following substitute for Resolution No. 20, pertaining to WVSMA survey about Annual Meeting format and site and presented by Parkersburg Academy of Medicine:

"WHEREAS, the WVSMA now has a rotating site for the Mid-Winter Meeting; and
WHEREAS, the Greenbrier remains the most expensive site in the state to hold a meeting, therefore be it
RESOLVED, that the WVSMA shall conduct a statewide survey through the component societies to determine if:

(1) The annual summer meeting should be business only—over a shorter duration of time, or

(2) The annual summer meeting should move around the state to various locations, or

(3) The annual summer meeting should remain like it is, and be it further
RESOLVED, that the results of the survey be published in the West Virginia Medical Journal."

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21. (Resolution No. 21, pertaining to affirmation of the term "Physician" and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolutions Committee as this has been attempted by professional organizations including the AMA and found not to be possible.)

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22. Adopted as presented by Parkersburg Academy of Medicine was Resolution No. 22, pertaining to WVSMA Auxiliary appointments (will be submitted to Constitution and Bylaws Committee):

"WHEREAS, the Auxilians are an extremely important resource to the WVSMA in maintaining and advancing the causes of medicine and health care in our state; and
WHEREAS, the Auxiliary is perceived to be a continuing resource of assistance to the WVSMA in the future; and
WHEREAS, their loyalty to the causes of WVSMA is unquestionable, therefore be it
RESOLVED, that the Auxiliary President be a voting member of the WVSMA Council, and be it further
RESOLVED, that the Auxiliary Legislative Chairman be a voting member of the WVSMA Legislative Committee."

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23. (Resolution No. 23, pertaining to generic drugs and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolutions Committee in view of the studies going on by the AMA and the FDA.)

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24. (Resolution No. 24, pertaining to patient lists and presented by Parkersburg Academy of Medicine, was not adopted on the advice of the Resolutions Committee, in turn, on the advice of legal counsel due to a possible charge of boycotting.)

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25. (Resolution No. 25, pertaining to county medical advertising and offered by Parkersburg Academy of Medicine, was not adopted on the advice of the Resolutions Committee because the AMA, after long study, has not been able to establish a clear-cut policy on advertising.)

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26. Adopted was the following substitute for Resolution No. 26, pertaining to AMA reports and presented by Parkersburg Academy of Medicine:

"WHEREAS, the AMA develops many reports for its members every year; and
WHEREAS, these reports are rarely made available to the AMA members; and
WHEREAS, these reports are given to the AMA Delegates, therefore be it
RESOLVED, that a listing of AMA reports be published in WESGRAM and, upon request, a copy of any report will be distributed to any member, at cost, subject to any applicable copyright restrictions."

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27. Adopted as presented by Parkersburg Academy of Medicine was Resolution No. 27, pertaining to advertising Rx drugs:

"WHEREAS, pharmaceutical companies now are using mass media to promote their prescription drugs; and
WHEREAS, lay people are often requesting these drugs without the knowledge to verify these promotional claims, therefore be it
RESOLVED, that the WVSMA go on record opposing this practice and forward this message to the appropriate pharmaceutical companies."

---

28. Adopted was the following substitute for Resolution No. 28, pertaining to indigent care provided by retired physicians and presented by Parkersburg Academy of Medicine:

"WHEREAS, there is a need for the state to provide care to many citizens not now having access; and
WHEREAS, there are several qualified retired physicians throughout the state with knowledge and experience; and
WHEREAS, those physicians cannot afford liability insurance, and cannot write prescriptions with an inactive license, therefore be it
RESOLVED, that the West Virginia State Medical Association petition the Legislature for legislation to provide liability coverage to qualified retired physicians who are willing to donate their time to care for the indigent and, be it also
RESOLVED, that the Legislature give them the privilege to provide care on a special retired license."

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29. Adopted as presented by Parkersburg Academy of Medicine was Resolution No. 29, pertaining to mini-internships:

"WHEREAS, 'Mini-Internships' are programs designed to provide a better understanding of physicians and their practices by local lay leaders; and
WHEREAS, these programs have been successfully conducted by various county and state medical societies (Ohio, Colorado, Florida); and
WHEREAS, these programs have reported a strongly positive impact on their community and public relations, therefore be it
RESOLVED, that the WVSMA encourage the development of these programs at the county level and, be it further
RESOLVED, that the WVSMA make use of the AMA's model programs to help establish the mini-internship's role in developing better understanding of physicians and their practices."

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30. (Resolution No. 30, pertaining to the WVSMA Executive Committee empowered with same authority as Council and presented by William D. Crigger, M.D., Kanawha Medical Society, was not adopted at the recommendation of the Resolutions Committee, deferring to the Bylaws already approved.)

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31. (Resolution No. 31, pertaining to dues waiver for WVSMA members in active political office and presented by the Ohio County Medical Society, was not adopted at the recommendation of the Resolutions Committee due to the question of political contributions.)

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32. Adopted as presented by Ohio County Medical Society was Resolution No. 32, pertaining to facilities for pediatric rehabilitation:

"WHEREAS, there currently exists no in-patient facilities for pediatric rehabilitation in the State of West Virginia; therefore be it
RESOLVED, that the WVSMA encourage and support the development of such a facility within the borders of the state."

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33. Adopted was the following substitute for Resolution No. 33, pertaining to inquiries to third-party insurance carriers and presented by Ohio County Medical Society:

"WHEREAS, third-party insurance carriers have widely varying ad-

ainistrative procedures; and
WHEREAS, physicians' offices frequently have encountered considerable difficulty in obtaining prompt responses to administrative questions, therefore be it
RESOLVED, that the WVSMA establish an ad hoc committee to study the scope of the problem and provide at least a preliminary report to Council within six months."

---

34. Adopted was the following substitute for Resolution No. 34, pertaining to scope of activity of PRO decisions, quality of physician reviews, and rotation of physicians as reviewers and presented by Ohio County Medical Society:

"WHEREAS, physician review organizations (PRO) have a major responsibility in evaluating medical care that is provided by physicians; and
WHEREAS, improper decisions regarding quality of care will pose serious consequences for physicians; and
WHEREAS, several West Virginia Medical Institute quality-of-care decisions have been inconsistently applied; therefore be it
RESOLVED, that WVSMA request the West Virginia Medical Institute to provide a program to define the scope of activity of PRO decisions in West Virginia, and be it further
RESOLVED, that WVMI make an effort to improve the quality of physician review activity that it offers, and be it further
RESOLVED, that the WVMI consider a plan of rotation for all physicians to serve as reviewers."

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35. (Resolution No. 35, pertaining to criteria and standards for quality of care and utilization and presented by Ohio County Medical Society, was not adopted at the recommendation of the Resolutions Committee because the AMA has been working on this and has been unable to reach a consensus.)

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36. Adopted was the following substitute for Resolution No. 36, pertaining to endorsed liability insurance carrier and presented by Ohio County Medical Society:

"WHEREAS, WVSMA has not recently solicited competitive bids from any in- or out-of-state insurance companies; therefore be it
RESOLVED, that the Council of the West Virginia State Medical Association, via its Insurance Committee, shall explore and investigate ways in which the endorsed insurance agent might be replaced to the advantage of the Association and its members, and in addition, explore ways in which insurance of all types might continue to be provided to its members."

---

37. Adopted was the following substitute for Resolution No. 37, pertaining to information session by Legislative Committee during Mid-Winter Clinical Conference and presented by James W. Kessel, M.D., Kanawha Medical Society:

"WHEREAS, the future of medicine has become evermore intimately connected with legislative activity; and
WHEREAS, the Legislature's 60-day session is held in the wintertime; and
WHEREAS, the Mid-Winter Clinical Conference sponsored by the West Virginia State Medical Association is usually held during the legislative period; and
WHEREAS, our members desire information impacting their practices; therefore be it
RESOLVED, that the Legislative Committee shall present an informational session during the Mid-Winter Clinical Conference in order to apprise the membership of current and proposed legislative activity."

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38. (Resolution No. 38, pertaining to prototype legislation addressing artificial life support systems and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolutions Committee because the religious, philosophical, and political implications of such a measure prohibit such an approach.)

39. Adopted was the following substitute for Resolution No. 39, pertaining to WVSMA support of organized nursing and presented by Parkersburg Academy of Medicine:

"WHEREAS, a shortage of nurses exists in the nation and in West Virginia; and
WHEREAS, nursing leadership has recognized the shortage for several years; and
WHEREAS, programs are in place in West Virginia to encourage re-entry of those with RN degrees and escalation of aides, LPNs, diploma, associate and bachelor RNs up the career ladder; and
WHEREAS, and additional LPN training program is being formulated; and
WHEREAS, on-the-job training of nurse extenders is in place at CAMC; therefore be it
RESOLVED, that the WVSMA support organized nursing in West Virginia in an attempt to alleviate the shortage of bedside care given by expansion of these programs, and be it further
RESOLVED, that this resolution be communicated to the AMA."

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40. Adopted was the following substitute for Resolution No. 40, pertaining to the WVSMA Executive Director and presented by Phil Branson, M.D.; Ed Spencer, M.D., and Theodore P. Werblin, M.D., Ph.D., Mercer County Medical Society:

"WHEREAS, the position of the Executive Director of the WVSMA has recently become vacant; therefore be it
RESOLVED, that the WVSMA establish a search committee to locate potential candidates for the position of Executive Director, who meet the qualifications as outlined in the current job description for the position."

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41. (Resolution No. 41, pertaining to the Annual Meeting of the House of Delegates, was withdrawn by the authors, Phil Branson, M.D.; Ed Spencer, M.D., and Theodore P. Werblin, M.D., Ph.D., Mercer County Medical Society.)

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42. (Resolution No. 42, pertaining to creation of a body to address provision of health care in West Virginia and offered by the Cabell County Medical Society, was referred to the Legislative Committee and to the Joint Committee as established by Resolution No. 2. See text below.)

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43. Adopted was the following substitute for Resolution for Resolu-

tion No. 43, pertaining to designation of West Virginia hospitals as smoke-free areas and presented by Cabell County Medical Society:

"WHEREAS, as physicians, it is our responsibility to promote healthy life styles amongst our patients; and
WHEREAS, it is our responsibility to encourage provision of a healthy and safe work environment; and
WHEREAS, the medical ill-effects of cigarette smoking are widely recognized; be it therefore
RESOLVED, that the West Virginia State Medical Association ask the West Virginia Hospital Association to join them in an effort to designate every West Virginia hospital as a "smoke-free" area and, be it further
RESOLVED, that the West Virginia State Medical Association encourage all West Virginia physicians to do the same in their offices."

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44. (Resolution No. 44, pertaining to provision of support for passage of the West Virginia Ground Water Protection Act in the 1990 legislative session and presented by Cabell County Medical Society, was referred to the Legislative Committee. See text below.)

Referred Resolutions

42. Resolution No. 42, pertaining to creation of a body to address provision of health care in West Virginia and presented by the Cabell County Medical Society, was referred to the Legislative Committee and to the Joint Committee established by Resolution No. 2:

"WHEREAS, we the Executive Committee of the Cabell County Medical Society recognize that we have a responsibility to society to promote those concepts and practices that will lead to quality health care for all the citizens of West Virginia; and
WHEREAS, we recognize that these responsibilities must be achieved within the limits of the finite resources available; and
WHEREAS, we believe that the formulation of health policy based on society's best interests is the joint responsibility of physicians, elected representatives, and regulatory bodies; and
WHEREAS, we recognize that difficult, ethical decisions must be taken in the just and wise allocation of health care resources and in the definition of the limits, level, and the quality of health care to be provided; and
WHEREAS, we recognize the existence of problems that need to be addressed including,

1) the need to control fiscal inefficiency in hospitals, health care agencies, institutions and government,

2) the need for reform of physician reimbursement,

3) the continuing need for malpractice legislative reform so that the escalation of costs from the practice of defensive medicine may be reduced,

4) the need to provide access by all citizens to a decent minimum level of health care, and the need to define that level and its limits,

5) the need for public/patients to have a realistic expectation of the results of medical treatment,

6) the need for government to recognize the full costs of providing a decent minimum level of health care to society as a whole, and to identify those programs, (e.g., Medicaid) to which allocation of financial resources has been inadequate.

7) the need for equitable distribution of uncompensated health care costs among physicians and hospitals;

8) the need for continuing fiscally efficient programs which ensure quality of care, effective utilization of resources, and maintenance of professional standards by true peer review,

9) the need to rationalize the allocation of educational costs of all medical professionals; therefore be it
RESOLVED, that the Council of the West Virginia State Medical Association create a mechanism by which these beliefs and the identified problems can be addressed and solutions proposed, and be it further
RESOLVED, that the Council of the West Virginia State Medical Association petition the Governor of the State of West Virginia to create a body of persons with representatives from the WVSMA and other relevant organizations to find solutions to the problems identified in the preamble to this resoltuion, using as a resource, the Health Care Policy Agenda for the American People (report UU, A-88), published by the Board of Trustees of the American Medical Association."

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44. Resolution No. 44, pertaining to provision of support for passage of the West Virginia Ground Water Protection Act in the 1990 West Virginia legislative session and presented by Cabell County Medical Society, was referred to the Legislative Committee:

"WHEREAS, we as physicians, have a duty to be concerned about the health and safety of the citizens of West Virginia; and
WHEREAS, ground water is a source of drinking water for 92 per cent of the rural population of the state; and
WHEREAS, there is concern among responsible legislators that further legislation is required to ensure that the existing quality of ground water is preserved; therefore be it
RESOLVED, that the West Virginia State Medical Association, through its component societies, examine and consider support of the West Virginia Ground Water Act (HB-2200) proposed by Mr. Chambers and Delegate Humphreys and which will be proposed again in the next legislative session."

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Amendments

Index to Constitution and Bylaws Amendments

First Reading—Subject to Final Vote Next Year:

C-1, B-1, B-2, C-2

Second Reading (Presented in 1988)—Final Vote Taken at 1989 Annual Meeting:

C-3, C-4, C-5

Amendment Which Constitution and Bylaws Committee Recommended Not Be Adopted:

B-3

Bylaws Amendments which were eligible for vote taken at 1989 Annual Meeting:

B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11

C-1 (Approved)

West Virginia State Medical Association
PROPOSED AMENDMENTS TO THE CONSTITUTION AND BYLAWS

(For Presentation During the First Session of the House of Delegates on Wednesday, August 16, 1989)

Amend ARTICLE VI.—THE COUNCIL—Sec. 1, first sentence, of the Constitution by deleting the word, "district," and inserting in lieu thereof the following words, "component society."

The sentence would then read, "The Council shall consist of the elected Councilors from each component society;
the immediate Past President, who shall serve as Chairman; and his immediate predecessor who shall serve as a Senior Councilor-at Large for one year and thereafter as a Junior Councilor-at-Large for one year, and the President, the President Elect, the Vice President and the Treasurer."

B-1 (Approved)

Amend CHAPTER VI.—THE COUNCIL—Sec. 5 of the Bylaws by deleting the current Section by inserting in lieu thereof the following: "Each component society shall have a minimum of one Councilor and shall be listed in alphabetical order and so numbered."
(1-Boone County Medical Society; 2-Brooke County Medical Society; 3-Cabell County Medical Society; 4-Central West Virginia Medical Society; 5-Eastern Panhandle Medical Society; 6-Fayette County Medical Society; 7-Greenbrier Valley Medical Society; 8-Hancock County Medical Society; 9-Harrison County Medical Society; 10-Jefferson County Medical Society; 11-Kanawha Medical Society; 12-Logan County Medical Society; 13-Marion County Medical Society; 14-Marshall County Medical Society; 15-Mason County Medical Society; 16-McDowell County Medical Society; 17-Mercer County Medical Society; 18-Mingo County Medical Society; 19-Monongalia County Medical Society; 20-Ohio County Medical Society; 21-Parkersburg Academy of Medicine; 22-Potomac Valley Medical Society; 23-Preston County Medical Society; 24-Putnam County Medical Society; 25-Raleigh County Medical Society; 26-South Branch Valley Medical Society; 27-Summers County Medical Society; 28-Tygart's Valley Medical Society; 29-Western Medical Society of West Virginia; 30-Wetzel County Medical Society; and 31-Wyoming County Medical Society)

B-2, Part A (Approved)

Amend CHAPTER VI.—THE COUNCIL—Sec. 6 as follows: "During the annual meeting of the Medical Association held in an even-numbered year, there shall be elected one (1) Councilor from each even-numbered component society to serve for two (2) years; and during the annual meeting of the Medical Association held in an odd-numbered year, there shall be elected one (1) Councilor from each odd-numbered component society to serve for two (2) years. Each Component Society which has two-hundred (200) members shall be entitled to two (2) Councilors. For each additional one-hundred (100) members a component society shall be entitled to one (1) additional Councilor. Proposed Amendments to the Constitution and By-Laws
Page 2

***B-2, Part B (Approved)**

In computing the membership base for determination of the number of Councilors to which a component society may be entitled, medical student members of the State Medical Association shall be counted as being members of the component society listed as their residence at the time they entered medical school; and resident members of the State Medical Association shall be counted as being members of the component society representative of their mailing address at the time they entered residency training."

(Note: The purpose of the above amendments is to assure representation, at the Council level, of each component society.)

The current Section 5 reads as follows: "The State of West Virginia shall be divided into fourteen Councilor Districts with the following geographical limits: District I—Hancock, Brooke, Ohio, Marshall and Wetzel Counties; District II—Marion, Monongalia and Preston Counties; District III—Morgan, Berkeley and Jefferson Counties; District IV—Mineral, Hampshire, Grant, Hardy and Pendleton Counties; District V—Taylor, Barbour, Tucker and Randolph Counties; District VI—Harrison and Doddridge Counties; District VII—Tyler, Pleasants, Ritchie, Wood, Wirt, Jackson, Calhoun and Roane Counties; District VIII—Gilmer, Lewis, Upshur, Braxton, Webster and Nicholas Counties; District IX—Putnam, Cabell, Lincoln and Wayne Counties; District X—Kanawha, Clay and Boone Counties; District XI—Fayette, Raleigh and Summers Counties; District XII—Logan and Mingo Counties; District XIII—Wyoming, McDowell and Mercer Counties; and District XIV—Pocahontas, Greenbrier and Monroe Counties."

The current Section 6 reads as follows: "During the annual meeting of the Medical Association held in an even-numbered year, there shall be elected one (1) Councilor from each even-numbered Councilor District to serve for two (2) years; and during the annual meeting of the Medical Association held in an odd-numbered year, there shall be

elected one (1) Councilor from each odd-numbered Councilor District to serve for two (2) years. Each Councilor District which has two-hundred (200) members shall be entitled to two (2) Councilors. For each additional one-hundred (100) members a Councilor District shall be entitled to one (1) additional Councilor.

In computing the membership base for determination of the number of Councilors to which a Councilor District may be entitled, medical student members of the State Medical Association shall be counted as being members of the Councilor District of their residence at the time they entered medical school."

*Note: The full Council disagreed with the Committe's recommendation regarding the second paragraph (Part B) of B-2, and would recommend replacing Park B with the following: "Only active members of each component society shall be counted in computing the membership base for determination of the number of Councilors to which a component society may be entitled."

C-2 (Approved)

West Virginia State Medical Association
PROPOSED AMENDMENT TO THE CONSTITUTION AND BYLAWS
(For presentation during the Final Session of the House of Delegates, Saturday, August 19, 1989, by request of the Executive Committee)

Amend ARTICLE VI—THE COUNCIL—Sec. 1, by deleting the second sentence which reads, "A majority of the membership of the Council shall constitute a quorum," and replacing it with the following: "Forty-percent of the membership of the Council shall constitute a quorum."

(Note: The purpose of this amendment is to help assure that a quorum of the Council can be obtained, to permit the Council to take timely action. If amendments C-1, B-1 and B-2 pass, the Council will grow to at least 44 members, and obtaining a quorum under the existing majority requirement will often be difficult. Reducing the requirement to the suggested 40% level still requires a significant level of participation before action can be taken, but hopefully not such a high number that no action will be possible due to lack of a quorum."

West Virginia State Medical Association

PROPOSED AMENDMENTS TO THE CONSTITUTION

(For Presentation During the First Session of the House of Delegates August 16, 1989; and To Be Finally Voted Upon During the Final Session of the House on Saturday, August 19, 1989—Previously Presented During the 1988 Annual Meeting.)

C-3 (Approved)

Amend ARTICLE IV.—COMPOSITION—Sec. 1, by deleting the word, "honorary," and inserting the word "associate."

The sentence would now read, "This Association shall consist of active, retired, associate, resident and student members."

(Note: The purpose of this amendment is to simply delete the word, "honorary," which inadvertently was overlooked when in 1987 an amendment was passed to eliminate the category of honorary membership; and to add a membership category of associate.)

C-4 (Not Approved)

Amend ARTICLE IV.—COMPOSITION—Sec. 7, by inserting a new Sec. 7 as follows: "Associate members of the WVSMA shall be osteopathic physicians or oral surgeons licensed in the State of West Virginia and who are members in good standing of their respective professional associations. Associate membership shall include licensed non-resident medical doctors who desire to be members of the West Virginia State Medical Association. Such associate members shall meet all qualifications outlined in the Association By-Laws."

C-5 (Not Approved)

Amend ARTICLE IV.—COMPOSITION—Sec. 7, by renumbering present Sec. 7 as Sec. 8.

(Note: The purpose of this amendment is to provide for associate membership in the Association.)

B-3 (Approved not to adopt)

(Note: The Constitution and By-Laws Committee recommends the following amendment not be adopted.)

West Virginia State Medical Association

PROPOSED AMENDMENTS TO THE BYLAWS

(For Presentation During the First Session
of the House of Delegates
on Wednesday, August 16, 1989)

Amend CHAPTER V.—DUTIES OF OFFICERS—Sec. 1, by deleting the period (.) after the word, "Delegates," in the first sentence and substituting a comma (,) and the following words: "and shall serve as an Alternate Delegate to the American Medical Association."

The sentence would then read, "The President shall preside at all meetings of the Association and of the House of Delegates, and shall serve as an Alternate Delegate to the American Medical Association."

(Note: It is proposed, that the President of the WVSMA also serve as the third Alternate Delegate to the AMA during his/her year of Presidency.

Currently the representation at the mid-year and annual AMA meetings includes the President and three Alternate AMA Delegates. If the President served as the third Alternate Delegate it would reduce the total WVSMA attendees to those meetings from 13 to 12.

This would provide experience to an individual who may serve as a delegate or alternate to the AMA in the future as well as reduce overall costs to the WVSMA for attendance at these meetings.)

West Virginia State Medical Association

PROPOSED
AMENDMENTS TO THE BYLAWS

(For Presentation During the First Session of the House of Delegates August 16, 1989; and to be finally voted upon during the final session of the House on Saturday, August 19, 1989—Previously Presented During the 1988 Annual Meeting.)

B-4 (not considered due to non-adoption of C-4)

Amend CHAPTER 1.—MEMBERSHIP—Sec. 5, by inserting a new Sec. 5 as follows: "Associate members of the WVSMA shall consist of those duly licensed osteopathic physicians, oral surgeons and/or non-resident doc

tors of medicine who are members in good standing of their respective professional associations. They shall not have the right to vote or hold office in this Association; but, shall otherwise enjoy all other membership privileges and benefits, including attending scientific and other meetings at membership rates and receiving all publications. They shall pay annual dues as may be fixed by the Association Council."

B-5 (not considered due to non-adoption of C-4)

Amend CHAPTER 1.—MEMBERSHIP—Sec. 5, by renumbering present Sec. 5 as Sec. 6.

(Note: The purpose of these amendments is to describe and outline privileges and benefits of associate membership.)

B-6 (Approved)

Amend CHAPTER III.—HOUSE OF DELEGATES—Sec. 3, by deleting the period (.) after the word, "quorum," and adding ", and only members of the House who are present shall have a right to vote."

(Note: The purpose of this amendment is to clarify the question of who has a right to vote in the House of Delegates.)

B-7 (Approved)

Amend CHAPTER VIII.—COMMITTEES—By adding a new Sec. 5 to read as follows: "The Audit Committee shall consist of six members of the Association, appointed by Council and who possess some expertise in financial matters. One of the six members shall be the Association Vice President, who shall serve as Chairman. The term of office for the other five members of Committee shall be for five years and shall be eligible for reelection. The members shall be appointed initially as five, four, three, two and one-year terms, and each year thereafter, be appointed for five-year terms."

(Note: The purpose of this amendment is to add to the Association's Standing Committees an Audit Committee which is ongoing from year to year to oversee the financial workings of the WVSMA.)

B-8 (Approved)

West Virginia State Medical Association

PROPOSED AMENDMENTS TO THE BYLAWS

(For Presentation During the First Session
of the House of Delegates
on Wednesday, August 16, 1989)

Amend CHAPTER VI.—THE COUNCIL—Sec. 1, Paragraph 1, by adding to paragraph one, after the first sentence, the following: "For purposes of determining the existence of a quorum at a special meeting, and for purposes of voting on any business of the Council conducted at such special meeting, a Councilor shall be included in such determination or vote if present at the special meeting either in person or by means of telephone conference call or similar electronic communication by means of which all persons participating in the special meeting can hear and speak to each other. The location of any such special meeting shall be deemed to be the place specified in the notice of such special meeting, or, if no location was specified, the place from which the telephone conference call or other means of electronic communication originates."

(Note: This amendment to the Bylaws is required to insure that business of the Association can be carried out in an expeditious manner.

At the July 9, 1989 Special House of Delegates meeting, the following motion was made and passed:

"That from this time forth, the WVSMA constitution, Chapter VIII, Section 2, Paragraph 5, be strictly adhered to such that only the House of Delegates or the Council may commit this Association to any course of action or determine Association policy."

The reference in the above motion to the Constitution and Bylaws currently reads as follows: CHAPTER VIII.—COMMITTEES, Sec. 2, Paragraph 5, states: "No committee or commission shall have power or authority to fix or determine Associational policy or to commit the Association to any course of action, such powers being expressly reserved to the House of Delegates and the Council."

In order to be responsive in a timely manner, under the above criteria, it is imperative that the Council have a quorum for all their meetings. To insure this, it is absolutely necessary to allow telephone conference calls in order to have a quorum at all meetings of the Council.)

B-9 (Approved)

Amend Chapter IX—SECTION—Sec. 3, by adding after the phrase "There is hereby authorized, within the membership framework of the West Virginia State Medical Association, establishment of ..."the words "Young Physicians," followed by a comma.

(Note: This is simply a formal reflection in the bylaws of action previously taken by the House of Delegates to authorize the establishment of a Young Physicians Section.)

B-10 (Approved)

Amend Chapter VIII.—SECTION 1 (b), to read as follows (old language stricken, new language underscored): The Executive Committee shall set the agenda for the Council Meetings, and shall make recommendations to the Council in regard to any pertinent matters, <u>shall fulfill such other duties as may be delegated to it by the House of Delegates or the Council and shall take such other actions as may become necessary, in the opinion of the Executive Committee, to protect the interests of the Association and its members, when the elements of time prevent the calling of a special meeting of the Council or the House of Delegates.</u>

B-11 (Approved)

Amend Chapter VIII.—SECTION 2, Paragraph 5, to read as follows (new language underscored): No committee or commission shall have power or authority to fix or determine Associational policy or to commit the Association to any course of action, such powers being expressly reserved to the House of Delegates and the Council, <u>except when immediate action by the Executive Committee as authorized in Section 1 (b) of this Chapter VIII, becomes necessary to protect the interests of the Association and its members, in which case decisions of the Executive Committee shall be authorized.</u>

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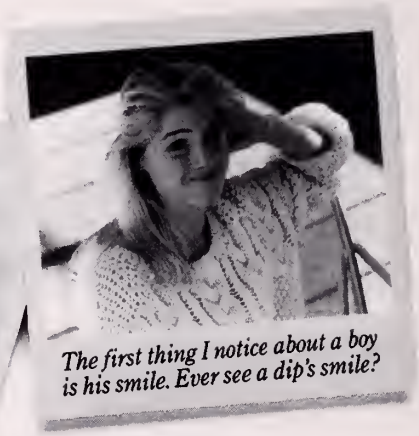

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Annual Reports

Cancer Committee

Meetings of the Cancer Committee were held August 20, 1988, during the WVSMA Annual Meeting at The Greenbrier in White Sulphur Springs, and during the Mid-Winter Clinical Conference on January 29, 1989, at the Holiday Inn Huntington-Gateway, Huntington.

Dr. John C. Frich, Jr., presented an update and history of the various tumor registry computer programs which led to the present expanded version, the SMART-FRICH CANCER MANAGER PROGRAM. He reported on his visits to several hospitals and the interest that was expressed for the need of a statewide tumor registry program. Hospitals visited included Bluefield, Raleigh, Beckley, CAMC, St. Mary's-Huntington, and Camden Clark.

Dr. Richard Pearson presented the following topics for discussion.

a) A study of death certificates coded out as cancer of the liver or as carcinomatosis—Cancer of the lung is overwhelming and at a higher level in WV compared to the rest of the country.

b) Recent trends in cancer deaths—There is an alarming climb in deaths since 1980. These deaths are above the national mortality for the elderly and mainly involve cancer of the lung.

c) Kanawha Valley Study—Involves three studies:
   1) Lung cancer appears to be due to smoking.
   2) Childhood leukemia—there is a low rate. (Effort being made to find out effect of chemicals)
   3) Veterinary study—(dogs, cats)—cat leukemia.

d) Mammography Study—obtaining information from approved registered machines. 100,000 mammograms done in 1986, which was one out of every four women. The different types of equipment used, as well as Xeromammogram and the value of needle localization for specific lesions was discussed.

e) A review of recent activities at the Mary Babb Randolph Cancer Center was presented. The Cancer Prevention and Control Program, which involves instructing nurses on self-breast examination technique and the effects of tobacco. The Cancer Information Service is doing a good job answering people's questions concerning cancer. It is a program available throughout the country.

f) The State Health Department NCI Grant—NCI is involved with cancer prevention and the education of legislators. NCI hopes to cut cancer deaths by 50 per cent by the year 2000 through screening and education programs to include the effects of tobacco, the importance of self breast examination, pap smears, etc.

Dr. Thomas Covey commented on the value of the Cancer Information Service in Morgantown. He reported on the Cancer Spring Meeting held at West Virginia University Hospital which was well attended.

Dr. Catalino Mendoza read a letter received from Nancy J. Tolliver, Director, State of West Virginia, Department of Health, which requested support for a grant to assist in addressing cancer problems in the state. A motion to write a letter of support was made by Dr. R. Pearson and seconded by Dr. Erlinda De La Pena—motion carried.

Dr. Dennis O'Connor commented on radiologists' mammogram reports and the need for biopsies. It was recommended that a letter be sent to the radiological society requesting their standards for monitoring mammography of suspicious, nonpalpable lesions.

Dr. Catalino Mendoza recommended that a subcommittee be organized to address mammography issues of safety, follow-up care and cost. The Committee approved the formation of a subcommittee to be selected by the Chairman, Doctor Mendoza.

A letter received from Dr. B. J. Kennedy, Chairman, Cancer Caucus, House of Delegates of the AMA, was read. Their next meeting is scheduled to be held in June and he would like the Committee to submit oncology problems for consideration by the Cancer Caucus. It was suggested that a letter be sent concerning the mammography issue.
Dr. Cordell De La Pena suggested that the oncology problems for consideration be given to the West Virginia Delegates for presentation to the Cancer Caucus. The Committee approved Doctor De La Pena's suggestion.

Dr. Rano S. Bofill read an article published in "The Cancer Letter" dated July 1, 1988, which stated that the Arizona Mammography Law is the best in the nation. This new state law requires insurance companies to cover screening mammography.

Dr. Peter Raich reported that data was submitted to the State Medical Journal which covered the TYPE OF USER of the Cancer Information Service Program at Mary Babb Randolph Cancer Center. He also related that there will be a "Update Oncology Conference" on March 17 and 18, 1989 in Morgantown which will deal with head and neck.

Dr. Tara Sharma announced that the Urological Society will be holding a meeting at the Radisson Hotel in Huntington in April. The topic to be covered will be prostate cancer.

Respectfully submitted,
Catalino B. Mendoza, Jr., M.D.
Chairman

Legislative Committee

The Legislative Committee met to prepare our legislative agenda for submission to Council on September 18, 1988. At its October meeting, Council did adopt this agenda which consisted of:

1. Tort Reform Legislation
   A. Collateral Source Rule
   B. Omnibus Tort Reform
2. Tobacco Legislation

3. Seat Belt Legislation
4. Resubmission of 1988 Legislative Proposals
   A. The Impaired Physicians Act
   B. ATV Safety Act
   C. Workers' Compensation Hearing Loss Standard
   D. Uniform Preadmission Standard
5. Amendment of the Medical Practice Act

Our agenda received little attention and no success, except for the amendment of the Medical Practice Act which happened to coincide with aims of the plaintiff attorneys. The overall agenda suffered from the attention and time required in efforts to defeat Senate Bill 576, the Omnibus Health Care Cost Control bill of 1989 which, of course, passed with the assistance of an extraordinary degree of duplicity on the part of the administration.

The collateral source rule legislation was introduced into both Houses of the Legislature but failed to come out of committee in either chamber. There was some suggestion that our ad campaign favoring this produced an unclear message in that it seemed to separate for our legislators the issue of the collateral source rule from the overall goal of tort reform.

The Omnibus Tort Reform bill was introduced into both Houses and received committee assignment but was never an item on the agenda of any committee. With the expected reduction in malpractice rate for the coming year it is likely that Tort Reform, at least on a broad scale, will be a difficult goal to achieve in the coming year.

Legislation involving tobacco failed because of difficulty within the House Health Committee itself. There was internal disagreement within the Committee and a veritable revolt as a result of some Committee members favoring the tobacco interests for smoking in public places. This internal problem resulted in the Committee itself being ineffective the later part of the session.

Seat belt legislation was introduced and came to a vote in the House but lost on a very close vote. It is reported that the Governor actively opposed this and lobbied against it.

The Impaired Physicians Act endorsed by the Association ran into difficulty when the Board of Medicine signified unhappiness with some of the bill's provisions. The Board of Medicine proposed a compromise which involved any physician being given one chance at rehabilitation without publicity. This was agreed to by the Association but the time lag involved in writing a new bill and its introduction resulted in the compromised bill never appearing on the agenda and the House Health Committee which, as reported above, was preoccupied with internal conflicts over tobacco legislation. In effect, our Impaired Physicians bill was a victim of the tobacco interests.

Our Hearing Loss Standards bill was introduced as a part of an Omnibus Workers' Compensation bill which did not achieve success. The standards, however, were warmly welcomed by business interests in the state.

The All-Terrain Vehicle Legislation did not come out of Committee although it had support. This bill too was caught up in a dispute between the dealers and the Department of Natural Resources which parties managed to stalemate on another so that the bill remained in Committee. There was no apparent opposition to our bill in Committee from either of those warring parties.

The Uniform Preadmission Standards bill was introduced only in the House and received resistance from the Insurance Department and from the Health Care Cost Review Authority as well as from the insurance industry. It never saw the light of day.

Amendment of the Medical Practice Act which involved deletion of the requirements for the review by the Board of Medicine of suits settled out of court was passed. We had advocated no review unless five or more malpractice suits totaling more than $25,000 were at issue. The Legislature passed, and the Governor signed, the bill sponsored by Senator Chafin which set the limit at five suits totaling more than $50,000. The plaintiff attorneys were obviously interested in facilitating the settlement of suits, nuisance suits or otherwise.

The Legislative Committee takes note of the renewed interest in legislation and lobbying for good legislation by members of this Association as a result of passage of Senate Bill 576. This interest on the part of members of the Association is quite possibly the only good that will ever have resulted from the passage of that misbegotten piece of legislation. We look forward to a more successful year in our legislative halls with that added interest and support.

Respectfully submitted,
Stephen D. Ward, M.D.
Chairman

August 16, 1989
White Sulphur Springs, WV

Committee on Medical Education and Hospitals

The West Virginia State Medical Association (WVSMA) is an accrediting arm of the Accreditation Council for Continuing Medical Education (ACCME), and the WVSMA's Committee on Medical Education and Hospitals (CMEH) is charged with the responsibility for accreditation of intrastate continuing medical education programs, primarily at community hospitals. The State Medical Association has had this role, with respect to surveyed and approved community hospitals and other organizations, since 1972.

On October 22, 1986, the CME Accreditation Program of the WVSMA was awarded continued recognition for a period of four years by the ACCME and its Committee for Review and Recognition (CRR).

Beginning in January, 1987, at the suggestion of the CRR, at least two persons have conducted the site surveys; and, in April 1987, the Procedures for Reconsideration and Appeal of Adverse Accreditation Decisions were written and approved by the CMEH. On May 8, 1987, the Procedures were approved by the Association's Council.

The First Annual WVSMA CME Workshop was held in Charleston in January, 1988, with 30 accreditation surveyors, providers and other CME personnel in attendance.

Accredited Sponsors of CME

As the result of a site survey, deemed appropriate upon receipt and review of a completed questionnaire, the following continuing medical education programs, in concert with essentials and protocol/guidelines developed by the ACCME, have been approved by the WVSMA's Committee for Category 1 credit of the Physician's Recognition Award of the American Medical Association:

—American College of Surgeons, WV Chapter
—American Heart Association, WV Affiliate
—Beckley Appalachian Regional Hospital, Beckley
—Broaddus Hospital/Myers Clinic, Philippi
—Charleston Area Medical Center, Charleston
—City Hospital, Martinsburg
—Fairmont General Hospital, Fairmont
—Jackson General Hospital, Ripley
—Mid-Ohio Valley CME Program, Parkersburg
—Monongahela Valley Association of Health Centers (Fairmont Clinic), Fairmont
—Raleigh County Medical Society CME Program, Beckley
—Reynolds Memorial Hospital, Glen Dale
—St. Francis Hospital, Charleston
—St. Mary's Hospital, Huntington
—United Hospital Center, Inc., Clarksburg
—VA Medical Center, Martinsburg
—Weirton Medical Center, Weirton
—WV Academy of Ophthalmology
—WV Academy of Otolaryngology—Head & Neck Surgery
—Wheeling Area Continuing Medical Education, Wheeling

Surveys/Resurveys Conducted

During 1988-89 (September-August), the following resurveys have been conducted since our last report: Raleigh County Medical Society; Broaddus Hospital/Myers Clinic; Monongahela Valley Association of Health Centers (formerly the Fairmont Clinic); City Hospital, Martinsburg; The WV Academy of Otolaryngology—Head and Neck Surgery; Mid-Ohio Valley CME, Parkersburg; United Hospital Center, Clarksburg; and Fairmont General Hospital.

Seven of the above programs were granted full four-year accreditation (continued), with one being requested to submit a one-year interim report to substantiate improvement or correction in certain areas; and one being granted a one-year probationary.

The American Heart Association, West Virginia Affiliate, is the only anticipated survey for the remainder of the year.

Summary

Working relationships with the national ACCME office in the Chicago area have continued to be good. Our accreditation process has not been carried out without some problems. We've reported to you in past years denied accreditation for one program, withdrawal of another, annual interim reports for others, and some programs have received continued probationary status until that program has been amended to meet Committee standards. But the overall results seem solid and effective.

We continue to see dedication and commitment to the CME programs over the State by CME directors, physicians and staff. Your Committee can assure you that Association expenditures are justified and provide an invaluable service.

Mary Hamilton, who has served as WVSMA CME Accreditation Coordinator since late 1979, will retire September 30, 1989. Mary's input and organizational skills will be greatly missed. As Chairman of your Committee for the last several years, I have relied heavily on her judgment and understanding of the CME process on the National level. I feel that I can speak for the Committee on Medical Education and Hospitals in wishing Mary and her family all of the best in what sounds like an exciting retirement. She will be missed!

Patty Barnhart, WVSMA Staff Secretary, will assume the responsibility of coordinating CME activities of your Committee.

Respectfully submitted,

William O. McMillan, Jr., MD
Chairman

David Z. Morgan, MD
Vice Chairman

August 16, 1989

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Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function:* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion

Information for Patients:

Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension. Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents. VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium. VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 298 patients.

Hypertension: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity

Other: Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension. In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred

Dosage and Administration: *Hypertension.* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour (See WARNINGS and PRECAUTIONS, *Drug Interactions.*)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS)

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions.*) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects.*) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia. In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions.*) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg

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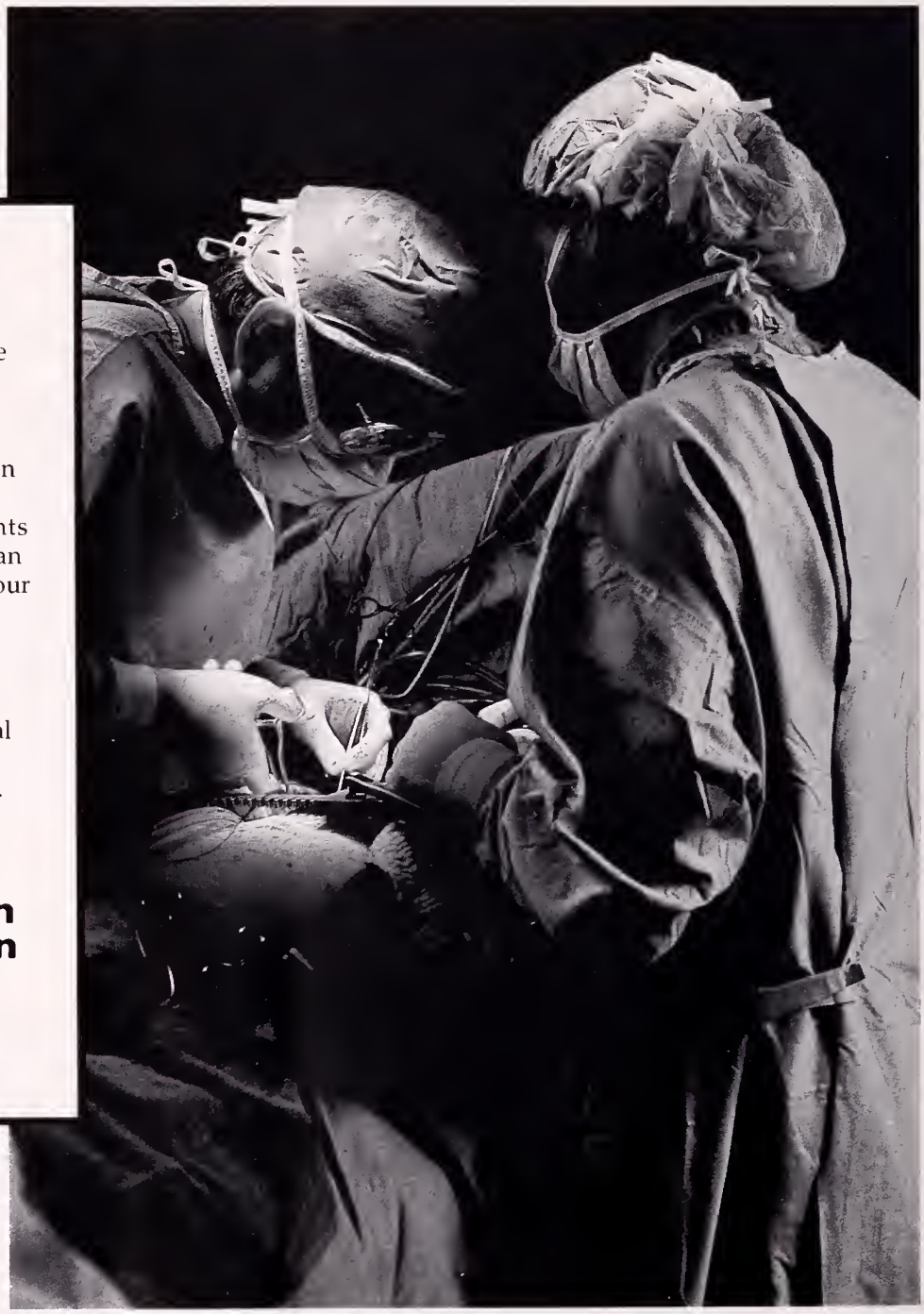

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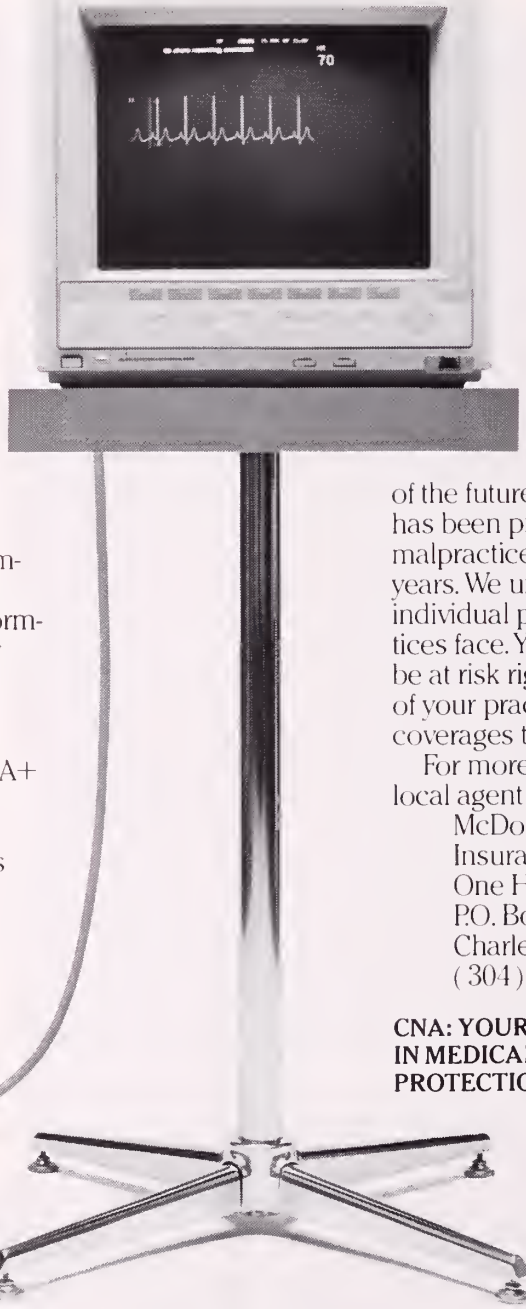

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates: $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364.

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

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Abdominal Aortic Aneurysm Repair in High-Risk Patients

A Review of Five Years' Surgical Experience of Non-Ruptured Abdominal Aortic Aneurysms in a Rural Tertiary Referral Center

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A review of 77 elective abdominal aortic aneurysms repaired over the past five years at West Virginia University Hospital in high-risk patients reveals an elevated incidence of concomitant occlusive vascular disease. We continue to perform routinely preoperative aortography with runoff films in these patients because of the valuable information it gives. This information permits us to perform vascular procedures to relieve the atherosclerotic stenotic lesions at the time of the abdominal aortic aneurysm repair. A review of risk factors, vascular anomalies, concomitant vascular procedures, complications, and mortality is given.

With the current medical-socioeconomic climate of surgical preauthorization, DRGs, predetermined length of stay, quality assurance reviews, and the predicted future use of standard practice protocols, both individual surgeons and institutions are being forced to reexamine and assess their diagnostic and management methods.

Several recent reports (1-3) in the literature question the need for routine aortography in the elective management of abdominal aortic aneurysms. These studies suggest that those patients who have a routine preoperative angiogram do not have a less complicated operative procedure as assessed by the site of aortic cross-clamping, total clamp time, volume of fluid and blood administered, incidence of renal vein ligation, renal or mesenteric bypass, site of the distal anastomosis, and occurrence of complications including graft thrombosis or atheromatous embolism, nor do they have a higher mortality rate. Further arguments against routine angiography besides low efficacy are its cost, lengthening of the patients' hospitalization, and inherent risks of the angiography itself, including puncture damage at the femoral site, dislodgement of emboli from the aneurysm, and renal damage from the contrast media.

As a tertiary referral center in a rural state with the highest cigarette smoking rate, cardiac mortality rate, incidence of obesity, and per capita ingestion of dietary fat within the United States, we perform routine angiography in our elective abdominal aortic aneurysm patients due to an increased incidence of atherosclerotic occlusive disease associated with aneurysmal disease and the need for concomitant vascular procedures.

This report reviews our institution's recent five-year surgical experience with non-ruptured abdominal aortic aneurysms.

TABLE 1
Clinical Presentation

	N = 77	%
Asymptomatic	31	40
Asymptomatic, but with evidence of enlargement	10	12
Symptomatic	36	47
a) abdominal pain	9	30
b) backache	6	20
c) tender mass	16	53
e) claudication	9	30

Patients and Methods

The charts of all patients who underwent surgery for a non-ruptured abdominal aortic aneurysm were reviewed for a five-year period (January, 1984, to December, 1988). Patients' records were examined for information concerning age, sex, length of stay, mode of presentation, atherosclerotic risk

TABLE 2
Risk Factors

	N = 77	%
CIGARETTE SMOKING	61	79
HYPERTENSION	45	58
DIABETES MELLITUS insulin dependent	3	3.8
OBESITY	9	11.6
LIPID DISORDER	6	7.8

TABLE 3

ASA RISK CLASS	N = 77	%
I		—
II	7	9
III	34	53
IV	27	37
V	—	—
OPERATIVE RISK FACTORS		
AGE > 70	34	44
CARDIAC	48	62
CABG PERFORMED	12	15.6
CEREBROVASCULAR	15	19.5
COPD	22	28.6
RENAL	12	15.5

factors, associated diseases, physical examination, and diagnostic studies performed. The anesthesia record was examined for operative risk factors, American Society of Anesthesiologists (ASA) risk class category, operative blood loss, and fluid and blood administration. The operative note was reviewed for type of operation and graft, concomitant procedures, anatomical anomalies, intraoperative complications, clamp position and time, and use of heparin. Postoperative morbidity and mortality were also noted.

Results

There were 77 patients with a nonruptured abdominal aortic aneurysm who were operated upon during the five-year period of January, 1984, through December, 1988. The group comprised 47 men and 30 women with a mean age of 68.8 years (range of 45 to 94 years).

Table 1 outlines the mode of clinical presentation. Almost half the patients presented with symptoms of either abdominal pain, backache, tender mass, claudication or a combination of these.

Risk factors were compiled and are shown in Table 2. Hypertension was defined as a diastolic BP greater than 95mmHg or known history of hypertension and currently on antihypertensive medication. Obesity was defined as greater than 120 per cent of ideal body weight. Lipid disorders were defined as cholesterol > 270 mg/dl. A family history of abdominal aortic aneurysm was noted in three patients (3.9 per cent).

Operative risk assessment by the Anesthesiology Department is presented in Table 3. Ninety per cent of this patient group was classified as either ASA risk class III or IV. Cardiac operative risk was defined as any patient with a history of myocardial infarction, congestive failure, or documented symptomatic coronary artery disease. Symptomatic patients with evidence of coronary artery disease were sent for cardiac evaluation and catheterization, and if necessary, coronary artery bypass grafting prior to aneurysm repair. Previous recent aortocoronary bypass was done in 15.6 per cent of the patients.

TABLE 4
Methods of Diagnosis

	N = 77	%
Angiography Used	66	85.7
Angiography alone	3	3.5
Ultrasound and angiography	53	68.8
CT & Angiography	3	3.8
CT, US, & Angiography	7	9.1
No Angiography	11	14.2
CT only	4	5.2
US only	1	1.2
US & CT	2	2.6
None	4	5.2

TABLE 5
Anatomic Information From Aortography

	N = 66	%
Aneurysm extension		
Suprarenal	4	6
Iliac	25	37.8
Renal Artery Disease		
Stenosis	10	15.2
Accessory renal arteries	2	3
Associated occlusive disease		
Celiac	2	3
SMA	1	1.5
Iliofemoropopliteal	30	45.5
Other		
Aortocaval fistula	1	1.5
Femoral aneurysm	2	3
Popliteal aneurysm	3	4.5

Cerebrovascular risk was defined as any patient with a history of transient ischemic attack, stroke, previous carotid surgery, or documented extracranial cerebrovascular occlusive disease. Chronic pulmonary disease was seen in 28.6 per cent of patients. Renal insufficiency was defined as a creatinine greater than 2.0 mg/dl.

Arteriography Performed

Routine arteriography was performed in all but 14 of the 77 patients. These 14 patients were acutely symptomatic with either abdominal or back pain, tender mass, or suspicion of impending rupture. They were operated upon expeditiously without preoperative aortography. Sixty-six arteriograms were performed by the modified Seldinger technique via the femoral approach with minimal complications. There were two transient rises in serum

TABLE 6
Operative Repair of Aneurysm

PROCEDURE		N = 77	(%)
Tube Graft		31	(40)
Aortoiliac Graft		4	(5.2)
Aortobifemoral Graft		42	(54.5)
GRAFT SIZES			
Goretex	18 mm	4	
Dacron (Woven)	16 mm	4	
	18 mm	17	
	20 mm	44	
	22 mm	5	
	24 mm	2	
	26 mm	1	

creatinine, and one small groin hematoma. No embolic episodes were encountered. Table 4 documents the variety of diagnostic approaches used.

Table 5 depicts the anatomic information derived from aortography. Note the 45-per cent incidence of iliofemoropopliteal occlusive disease, 40 per cent of which required a concomitant vascular procedure beyond that of aneurysm repair.

The overall mean average size of the aneurysm was 6.1cm. One of the aneurysms was less than 4cm (this smallest aneurysm was a symptomatic 3.5cm lesion). Fourteen per cent were 4-5 cm, 32.4 per cent were 5-6cm, 35.1 per cent were 6-7cm, and 14.3 per cent were greater than 7cm. There were two aneurysms 11 cm in diameter.

Table 6 lists the major procedures performed for aneurysm repair. Tube grafts were used in selected patients with absence of iliac and femoral aneurysms and without iliac occlusive disease. Four aortoiliac grafts were used early in the study period for extension of the aneurysm into the proximal iliac system, but are no longer used. The vast majority of the grafts chosen were woven Dacron, varying in size from 16 to 26mm.

Prior to aortic cross-clamping, all patients were anticoagulated with either 5,000 or 7,500 units of intravenous heparin, dependent on the patient's weight. Table 7 outlines the 16 other concomitant vascular procedures performed based on arteriographic findings prior to surgery correlated with the patient's symptoms (e.g. visceral angina)

as well as stenotic or occlusive lesion (e.g. severe stenosis of the proximal profunda femoris artery in association with complete occlusion of the superficial femoral artery). These 16 vascular procedures represent correction of approximately 40 per cent of all concomitant occlusive lesions seen on preoperative angiography.

A significant number of pathogenic vascular anomalies were also encountered during the operation (Table 8). A total of five left renal veins were ligated without change in renal function. Two cases were performed via a retroperitoneal approach, and both cases had recent colon resections for adenocarcinoma. Three cholecystectomies were performed for chronic calculous cholecysitis without complication.

The average estimated blood loss per case was 1800cc. Average replacement per case was 6500cc crystalloid, 650cc of plasmanate, 700cc of packed red blood cells and 800cc of autologous blood from the Cell Saver. The Cell Saver was used in almost all of the cases.

Proximal control and aortic cross-clamping were performed at the infrarenal level in all except three cases. There was one suprarenal cross-clamping for an associated bilateral renal artery stenosis and two supraceliac clampings for proximal extension of the aneurysm with renal artery involvement. The mean aortic cross-clamp time was 58 minutes.

Operative Complications

There were four operative complications. An inflammatory aneurysm was adherent to and compressed the vena cava, and ligation of the vena cava was performed without evidence of postoperative lower extremity venous hypertension. One patient required thromboembolectomy of the left iliofemoral system for fresh clot. A left ureter was divided inadvertently because of being adherent to and incorporated in the wall of a left common iliac artery aneurysm. Primary repair was performed with 6-0 chromic catgut sutures, and a double-J stent was placed which was removed four months later. Finally, in one patient the left iliac vein was torn up into the vena cava resulting in massive hemorrhage and an operative death due to consumptive coagulopathy. Table 9 summarizes the operative morbidity and mortality. The intraoperative complication rate was 5.2 per cent, the intra-operative mortality was 2.6 per cent, and the 30-day mortality rate was 7.7 per cent (6/77). Postoperative complications are summarized in Table 10. A total of 25 postoperative complications occurred in 17 patients (22 per cent).

One month to five years' follow-up of survivors past 30 days reveals a late mortality rate of 12.6 per cent (Table 11). Late morbidity included two cases of small bowel obstruction which occurred six months and two years after aneurysm repair and required enterolysis, one case of postoperative pancreatitis progressing to a pancreatic pseudocyst four months later which required cystogastrostomy, and a patient with carcinoma of the lung with brain metastases. And finally, a cerebrovascular accident with right-hand weakness and a left hip fracture occurring in the oldest patient within the group three years after her aneurysm repair at the age of 94 years.

TABLE 7
Concomitant Vascular Procedures

Profundoplasty	5
Common Femoral Artery Endarterectomy	3
Common Femoral Artery Patch Graft	2
Aorto-Superior Mesenteric Artery Goretex Bypass	1
Aortorenal Bypass	1
Renal Endarterectomy	2
Goretex Jump Graft from Dacron Limb to Superficial Femoral Artery	1
Below-Knee Femoropopliteal Bypass	1
Closure Aorto-Caval Fistula	1

TABLE 8
Pathologic Vascular Anomalies Encountered During Operation

Retroaortic Left Renal Vein	4
Double Inferior Vena Cava	1
Anterior Right Common Iliac Vein	1
Aortocaval Fistula	1
Inflammatory Aneurysm	2

Discussion

Several recent studies (1, 2, 3) in the literature support only a selective use of routine preoperative angiography in the evaluation of non-ruptured abdominal aortic aneurysms. The specific indications they suggest include patients suspected of having a thoracoabdominal aneurysm, potentially cureable hypertension, horseshoe kidney, intestinal angina, iliofemoral occlusive disease, and in those who are having coronary or carotid angiography. Further, they feel the added cost, extension of hospital length of stay, exposure to the risk of contrast-induced nephrotoxicity, and the risk of embolism weigh against the routine use of angiography in this clinical setting. These authors feel that most of these lesions can be either anticipated before operation with the use of ultrasound and CT or discovered at operation.

This retrospective review demonstrates several reasons why routine angiography is not only necessary but safe and successful in the complete preoperative evaluation of the non-ruptured abdominal aortic aneurysm for our patient population. The angiography itself is performed by a radiologist dedicated to vascular and interventional work only. Higher-risk patients (diabetes, or serum creatinine greater than 1.5mg/dl) are given a preangiogram bolus of 25 grams of mannitol in addition to the over-

TABLE 9
Operative Morbidity and Mortality

Intraoperative Complications	4/77	(5.2%)
Division Left Ureter		1
Ligation IVC Associated with an Inflammatory Aneurysm		1
Thrombosis Left Iliofemoral System		1
Tear Left Iliac Vein with Hemorrhage		1
Operative Deaths	2/77	(2.6%)
Torn Left Iliac Vein (see above)		1
Cardiopulmonary Arrest upon Completion of case (Presumed MI)		1
Early Death (< 30 Days)	6/77	(7.7%)
Operative Death (see above)		2
Acute Renal Failure		1
Pulmonary Embolus		1
Myocardial Infarction		1
Pulmonary Insufficiency		1

TABLE 10
Postoperative Complications

Cardiac	Congestive Heart Failure	3
	Supraventricular Arrhythmias	2
	Myocardial Infarction	2
Pulmonary	Atelectasis	2
	ARDS	2
	Pneumonia	1
Renal	ARF with Resolution	2
	ARF to Chronic Hemodialysis	1
Thromboembolic	Microembolic shower to both legs with resultant BKA	1
Wound Infections		0
Diarrhea	Responded to Lomotil	1
Ischemic Colitis	Bloody diarrhea, resolved in three days, negative flexible sigmoidoscopy	1
Pancreatitis		2
Fascial Dehiscence		1
Urinary Tract Infection		3
Deep Vein Thrombosis		1

night intravenous hydration given all patients. Not one complication in regard to arteriography puncture site and subsequent operation just several days later has been seen in the 66 patients over five years. Although the patients average three days in the hospital preoperatively, the high "risk-severity-index" of our referred patient population necessitates several days of multisystem workup, especially cardiac evaluation. Further, only a few minor complications have been encountered with the use of angiography.

High Rates in State

Our state population is well known for leading the nation in cardiac

TABLE 11
Late Mortality (> 30 Days)
(30-day to five-year follow-up)
9/71 (12.6 per cent)

Myocardial Infarction	4
Congestive Heart Failure	1
Metastatic Cancer	3
Cerebrovascular Accident	1

mortality rates, incidence of obesity, cigarette smoking rate and ingestion of dietary fats. With almost 80 per cent of the referred population group being active smokers (mean consumption of 65 pack years), a 62-per cent incidence of severe coronary artery disease, and the overall high "severity-index" of our patient population, it stands to reason that this group should have an incidence of concomitant atherosclerotic occlusive disease as high as any published study. Further, we have not found the use of CT and ultrasound to eliminate the need for angiography in lesions such as complete superficial femoral artery occlusion combined with severe stenosis of the deep femoral artery or renal artery stenosis.

Our study revealed a 45-per cent incidence of significant associated ileofemoropopliteal occlusive disease among the 66 patients undergoing arteriography. Forty per cent of these lesions were severe enough to require concomitant vascular procedures.

A more controversial note is the consideration of renal artery stenosis in normotensive patients. Our study had a 15-per cent incidence of renal artery stenosis with three patients having concomitant aortorenal bypass or endarterectomy. The natural history of these lesions is not fully known. However, in a few select younger patients with either hypertension or elevated creatinine, we have had success with renal artery balloon angioplasty prior to aneurysm repair.

Summary

A retrospective review of 77 patients with non-ruptured abdominal aortic aneurysm diagnosed and operated upon at our institution over a five-year period is presented. This high-risk population with severe coexisting atherosclerotic peripheral vascular disease was screened routinely with preoperative angiography in a safe and effective manner when the patients were stable and asymptomatic. We have found preoperative angiography to be a very valuable diagnostic study as plans are made for the operative repair of concomitant atherosclerotic lesions.

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Case Report

Pseudo-Ectopic Pregnancy: An Ovarian Cyst Mimicking Ectopic Pregnancy

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A 19-year-old female presented with mild right lower quadrant pain and a minimal amount of vaginal bleeding. A history of positive serum B-hcG pregnancy test five weeks prior to ultrasound examination was given.

Ultrasound of the pelvis revealed a normal-appearing uterus. A 4.5-cm extra-uterine cystic mass was identified in the right adnexal region (Figure 1). A linear echogenic structure having the appearance of a fetal pole was noted within the cyst, but no fetal heart tones could be identified. A moderate amount of free intraperitoneal fluid was noted in the region of the cul-de-sac (Figure 2). The ultrasound examination was interpreted as being consistent with a diagnosis of ectopic pregnancy.

Surgical exploration revealed a two-cm right ovarian cyst which contained intermixed blood and corpus luteum tissue.

Figure 1. Right adnexal cystic mass.

Figure 2. Longitudinal projection of uterus demonstrating free fluid posterior to the lower uterine segment.

Discussion

In patients suspected of harboring an extrauterine gestation (EUG), ultrasound is probably most valuable in demonstrating an intrauterine pregnancy (IUP). This is based on the clinically documented rarity of an EUG along with an IUP, although gynecologic procedures such as ovulation induction can alter this frequency. In patients with no special risk factors (history of prior ecotopic, PID, presence of an IUD, in vitro fertilization, prior tubal surgery), the rate of concomitant IUP and EUG is quoted as one per 30,000 pregnancies. In patients undergoing ovulation induction this may increase to one per 7,000 pregnancies (1).

The double decidual sac sign (DDSS) within the uterus is suggestive of an early intrauterine gestation. This consists of two concentric rings surrounding a part of the gestational sac and is thought to represent the decidua parietalis (decidua vera) adjacent to the decidua capsularis. However, the

DDSS may be difficult to distinguish from the now well-known pseudogestational sac appearance of the uterus. The latter entity is probably a result of hormonal stimulation and can be seen in up to one half of cases of ectopic pregnancy (1).

Other classic ultrasound signs such as an adnexal mass or fluid in the cul-de-sac may be even more suggestive of an ectopic pregnancy. Occasionally an adnexal mass with the appearance of a gestational sac is seen, and cardiac activity within this mass confirms the diagnosis (2, 3).

In the case presented the extrauterine mass had the appearance of a classic ectopic pregnancy; however, no cardiac activity was identified within the fetal pole. The finding at surgery of hemorrhagic ovarian cyst should not be surprising given the variable sonographic appearance of hemorrhage within a cystic structure. This is mostly related to the rate of clot formation and subsequent resolution. As reported by Anderson et al. (4), fresh blood classically should be anechoic. In the subacute stage it assumes a mixed echogenicity and later becomes anechoic again (5). Of course, the pattern may be a mixture of these processes, leading to an extreme variation in sonographic appearance.

In summary, despite the classical appearance of an extrauterine gestational sac with a fetal pole, a definitive diagnosis of ectopic pregnancy cannot be made without identifying fetal cardiac activity.

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Infant Mortality in West Virginia

Identifying Risk Factors for Public Health Intervention

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Because infant death rates vary within populations, it is important for program managers and planners to identify high-risk subgroups for whom effective interventions can be targeted. Matching infant death certificates with birth records permits us to describe infant mortality and calculate risks by a variety of maternal and infant characteristics recorded at birth.

In this paper, we illustrate how several variables are associated with infant death, and show how analysis of a recent birth cohort in West Virginia can assist health officials in determining appropriate strategies for risk reduction. While efforts need to focus on reducing social and economic barriers to maternal and infant health, different strategies are required to address separately the neonatal and postneonatal components of infant mortality.

Matched records can be used in a variety of ways to develop support for, and highlight the needs of, West Virginia's Maternal and Child Health programs, to monitor trends over time, to evaluate program achievements, and to modify program goals.

Infant mortality has long been used as both a measure of the care provided to mothers and infants and an index of community health and social well-being. From 1960 to 1984, West Virginia experienced a 57-per cent decline in the infant death rate, from 24.3 to 11.0 per 1,000 live-born infants (unpublished data, West Virginia Department of Health). Despite this favorable trend, West Virginia still had the 18th highest overall rate in 1984 among the 50 states and the District of Columbia, and the 5th highest rate for white infants (1). These rankings suggest that great potential exists in this state for improving newborn health and survival through the first year of life.

From a planning perspective, infant mortality first must be addressed by identifying groups for whom existing or proposed interventions can be targeted effectively. Because birth certificates record a variety of descriptive maternal and infant characteristics, they are a basic source of information about newborns. By matching birth records with corresponding death certificates, we can quantify the portion of mortality associated with these characteristics and calculate risks for infant death. In this paper, we describe a recent five-year birth cohort in West Virginia and illustrate how different variables are related to infant survival in the neonatal and postneonatal periods.

Methods

Since 1976, the West Virginia Department of Health has linked birth and death records for all infants born alive to resident mothers and who died within the first year of life. Data from all resident births for a given period constitute a birth cohort file. We used the 1979-83 West Virginia cohort file, restricting analysis to single-delivery infants who comprised 98.3 per cent of all live births. Matched infant death records were aggregated according

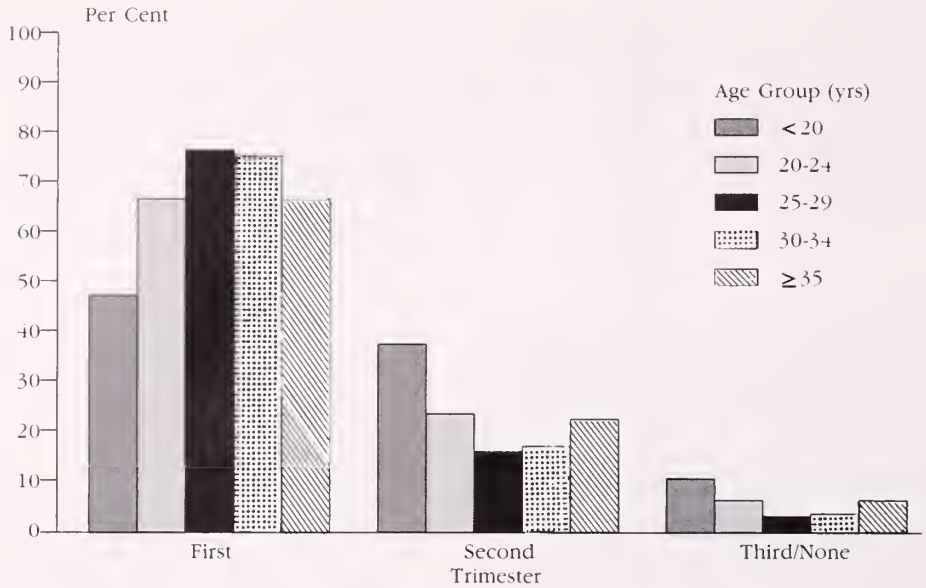

Figure 1. Per cent of maternal age group participating in prenatal care, by trimester, West Virginia birth cohort, 1979-1983.

to characteristics recorded at birth. Infant characteristics analyzed included birth weight, race, and live birth order; maternal characteristics included age, years of education completed, and month of entry into prenatal care. Marital status and gestational age were not evaluated.

We define infant mortality risk as all deaths from 0 to 364 days after birth per 1,000 live births; neonatal mortality risk as deaths occurring before 28 days of life per 1,000 live births; and postneonatal risk as deaths from 28 to 364 days per 1,000 neonatal survivors (i.e., births minus neonatal deaths). The term "risk" describes more precisely a rate referring to deaths in a cohort followed over time. In contrast, a rate based on deaths in the same calendar year(s) as births is not a true risk since it does not reflect the experience of all cohort members and includes deaths from earlier births. To measure the strength of association with infant death, relative risks were used to compare the magnitude of risk for various subgroups with a reference group (2). To control for confounding, crude relative risks were adjusted by birth weight or maternal age using weighted, stratified analysis (2).

Underlying causes of infant death were coded according to the International Classification of Diseases, Ninth Revision (ICD-9) (3), and aggregated into the following categories: 1) Perinatal conditions (referring to the time of disease onset) including prematurity and low birth weight, respiratory distress syndrome, bronchopulmonary dysplasia and other respiratory conditions, birth trauma-hypoxia-asphyxia, and other conditions excluding infection; 2) Infections; 3) Congenital anomalies; 4) Injuries; 5) Sudden infant death syndrome (SIDS); and 6) All other causes. Cause-of-death tabulations were then subdivided by birth weight and age at death (neonatal vs. postneonatal).

Results

The Birth Cohort

From 1979-1983, there were 137,710 single-delivery births in West Virginia; 95.6 per cent were white, 3.9 per cent were black, and 0.5 per cent belonged to other racial/ethnic groups (Table 1). Teen mothers (<20 years of age) accounted for 19.4 per cent of all births while mothers ≥35 years accounted for 3.6 per cent. Almost 30 per cent of the mothers had not graduated from high school (<12 years education), and 24 per cent were educated beyond high school (≥13 years).

Reflecting large family size and greater maternal parity, infants who were fourth or later in live birth order (high birth order) constituted 7.3 per cent of the births. As expected, teenage mothers had the smallest percentage of high-birth-order infants (0.3 per cent) while mothers ≥35 years had the largest (44.5 per cent). Within maternal age groups, blacks and women with lower education levels had greater high-birth-order percentages than whites and women with higher education levels.

Prenatal care began in the first trimester for 67.1 per cent of all infants and in the third trimester or not at all for 5.5 per cent. Prenatal care information was missing for 3.9 per cent of the newborns, who were generally premature and whose antenatal records were not available at delivery. Teen mothers used prenatal care the least, having the lowest percentage of early (first trimester) entry and the highest percentage of late (third trimester) or no entry (Figure 1). For all maternal ages, blacks and women with less education used prenatal services less extensively.

Overall, 6.0 per cent of the infants weighed <2,500g at birth (low birth weight); 0.9 per cent weighed <1,500g (very low birth weight). Low birth weight was related to timing of prenatal care—the percentage was lowest for mothers who initiated care in the first trimester and increased with increasing delay (Table 1). The highest percentage was observed for the small group of infants whose birth certificates did not record a date for prenatal care entry, reflecting the association with premature delivery.

Low birth weight was almost twice as frequent among black infants as among white infants, more common among the youngest (<20 years) and oldest (≥35 years) mothers than among mothers of intermediate age, and inversely related to maternal education.

Teenage mothers contributed 27 per cent of all low-birth-weight newborns. Differences in low birth weight frequency by race, maternal age, and maternal education persisted at each level of prenatal care. The high percentages of low birth weight among firstborn and high-

TABLE 1
Selected Characteristics of Live Births and Prevalence of Low Birth Weight (LBW)*. 1979-1983 West Virginia Single-Delivery Birth Cohort.

Characteristic	*Births (%) N=137710*	*Per cent of births with LBW*	*Relative risk for LBW*
All births	100.0	6.0	- - -
Race			
White	95.6	5.9	1.0 (Referent)
Black	3.9	10.6	1.8
Other	0.5	6.8	1.2
Maternal Age (years)			
<20	19.4	8.2	1.7
(<15)	(0.3)	(12.9)	(2.7)
(15-17)	(6.8)	(9.5)	(2.0)
(18-19)	(12.3)	(7.4)	(1.6)
20-24	36.7	5.9	1.3
25-29	28.0	4.7	1.0 (Referent)
30-34	12.2	5.1	1.1
≥35	3.6	7.0	1.5
Maternal Education (years)			
<12	29.6	8.6	2.5
12	46.3	5.2	1.5
13-15	12.9	4.6	1.3
≥16	10.6	3.5	1.0 (Referent)
Unknown	0.6	11.6	3.3
Live Birth Order			
First	44.6	6.8	1.0 (Referent)
Second	33.6	4.9	0.7
Third	14.1	5.5	0.8
Fourth or higher	7.3	6.8	1.0
Unknown	0.4	5.8	0.9
Onset of Prenatal Care (trimester)			
First	67.1	5.1	1.0 (Referent)
Second	23.5	6.9	1.4
Third or none	5.5	8.3	1.6
Unknown	3.9	12.7	2.5
Birth Weight (grams)			
<1500	0.9	- - -	- - -
1500-2499	5.1	- - -	- - -
≥2500	93.9	- - -	- - -
Unknown	0.1	- - -	- - -

*Defined as weighing <2,500g at birth.

birth-order infants reflect the effects of young maternal age on the former, and older maternal age on the latter.

There were 1,493 infants who died within the first year, for an overall mortality risk of 10.8 deaths per 1,000 live births (Table 2). Sixty-six per cent of the deaths occurred in the neonatal period. For neonates, the mortality risk is highest for very-low-birth-weight babies and declines sharply with increasing birth weight. For postneonates, the risk also declines with increasing birth weight but not as steeply as for neonates. Despite comprising only six per cent of the birth population, low birth weights account for 70 per cent of the neonatal deaths of known birth weight (Figure 2). Heavier infants (≥2500g) account for 73 per cent of the postneonatal deaths since their survival advantage is not as great in later infancy as during the first month.

Black infants have 1.7 times the mortality risk of whites, a pattern reflected in both the neonatal and postneonatal peroids (Table 2). By maternal age, the risks are greatest for infants of teenage mothers, decline with increasing age to 25-29 years, then increase with older maternal age. Teenage deliveries account for 26 per cent of the neonatal and 32 per cent of the postneonatal deaths (Figure 3). Increased risk is also strongly associated with lower levels of maternal education, decreasing for both neonates and postneonates with increasing levels. This finding persists at each level of maternal age.

When adjustments are made for differences in the prevalence of low birth weight (Table 1), elevated neonatal risks associated with blacks, young mothers, and low educational attainment are sharply reduced and almost eliminated (Table 3). In contrast, elevated postneonatal mortality experienced by these groups is only modestly offset by adjusting for birth weight. These findings indicate that differences in low birth weight distribution rather than differences in birth weight-specific survival are the source of excess neonatal mortality among high-risk groups while excess postneonatal mortality is related both to unfavorable birth weight distributions and to greater birth weight-specific risks among heavier infants.

Mortality by birth order differs by infant age (Tables 2, 3). During the neonatal period, there is little variation while during the postneonatal period the risk increases with successively higher birth order. When we consider that the percentage of high-risk teenage mothers decreases with increasing birth order and adjust the risks for maternal age, the increase in postneonatal risk with higher birth order becomes more pronounced, emphasizing the association of greater parity and large family size with postneonatal death.

Causes of Infant Death

Underlying cause of infant death varies by birth weight and by age at death (Table 4). Whereas conditions arising in the perinatal period are the leading cause for neonates and small (<2500g) infants, they are relatively less important among older and heavier infants. Ninety-three per cent of the deaths from these conditions occur in the

TABLE 2

Infant, Neonatal, and Postneonatal Deaths and Mortality Risks for Selected Characteristics. 1979-1983, West Virginia Single-Delivery Birth Cohort.

	Infant			*Neonatal*			*Postneonatal*		
Characteristic	*Deaths*	*Mortality Risk**	*Relative Risk*	*Deaths*	*Mortality Risk**	*Relative Risk*	*Deaths*	*Mortality Risk +*	*Relative Risk*
All	1493	10.8	- -	980	7.1	- -	513	3.8	- -
Birth Weight (grams)									
<1,500	533	444.9	87.2	484	404.0	183.6	49	68.6	23.7
1,500-2,499	271	38.5	7.5	184	26.2	11.9	87	12.7	4.4
≥2,500 (Referent)	656	5.1	1.0	281	2.2	1.0	375	2.9	1.0
Race									
Black	99	18.3	1.7	68	12.6	1.8	31	5.8	1.6
White (Referent)	1390	10.6	1.0	910	6.9	1.0	480	3.7	1.0
Maternal Age (years)									
<20	421	15.7	1.8	257	9.6	1.6	164	6.2	2.3
(<15)	(10)	(28.7)	(3.3)	(8)	(23.0)	(3.8)	(2)	(5.9)	(2.2)
(15-17)	(181)	(19.3)	(2.2)	(115)	(12.2)	(2.0)	(66)	(7.1)	(2.6)
(18-19)	(230)	(13.6)	(1.6)	(134)	(7.9)	(1.3)	(96)	(5.7)	(2.1)
20-24	531	10.5	1.2	352	7.0	1.2	179	3.6	1.3
25-29 (Referent)	335	8.7	1.0	232	6.0	1.0	103	2.7	1.0
30-34	157	9.3	1.1	112	6.7	1.1	45	2.7	1.0
≥35	49	9.8	1.1	27	5.4	0.9	22	4.4	1.6
Maternal Education (years)									
0-11	648	15.9	2.4	368	9.0	1.8	279	6.9	4.1
12	563	8.8	1.3	394	6.2	1.2	169	2.7	1.6
13-15	152	8.6	1.3	113	6.4	1.3	39	2.2	1.3
≥16 (Referent)	98	6.7	1.0	73	5.0	1.0	25	1.7	1.0
Live Birth Order									
First (Referent)	680	11.1	1.0	484	7.9	1.0	196	3.2	1.0
Second	458	9.9	0.9	296	6.4	0.8	162	3.5	1.1
Third	224	11.5	1.0	127	6.5	0.8	97	5.0	1.6
Fourth or higher	124	12.3	1.1	67	6.7	0.8	57	5.7	1.8

*Deaths per 1,000 live births
+Deaths per 1,000 neonatal survivors

neonatal period, and 94 per cent are associated with low birth weight. SIDS is the leading cause of postneonatal death. Ninety-one per cent of all SIDS deaths occur in the postneonatal period, and 83 per cent involve infants who weigh ≥2500g at birth. Congenital anomalies is the second leading cause for both neonates and postneonates and the leading cause for infants ≥2500g.

Infectious disease is the third leading cause of both neonatal and postneonatal death. The majority of infections responsible for neonatal deaths are acquired perinatally (not shown) while those responsible for postneonatal death are nonperinatal. Eighty-two per cent of the postneonates who die from infections had birth weights ≥2500g. Injury (external causes) is the fifth leading cause of overall infant death. Of 42 infants whose deaths were caused by injury, 35 (83 per cent) were postneonates weighing ≥2500g. In general, major causes of infant death other than those arising in the perinatal period most commonly involve infants with birth weights ≥2500g and, with the exception of birth defects, tend to involve postneonates rather than younger infants.

Discussion

Overall infant mortality risks are associated with a variety of infantand maternal characteristics that reflect social class differentials in access and availability of care (4). Targeting interventions depends on identifying population subgroups for whom there are substantial barriers to healthy prenatal behavior, to adequate obstetric and pediatric care, and to appropriate nutrition and living environments for the child. Each risk factor discussed in this paper is influenced by one or more of the others. For example, birth weight is related to prenatal care, race, maternal age and education while prenatal care is itself influenced by one or more of the others. Family size, a strong factor in postneonatal death, also varies by race, maternal age and education. Although not shown, maternal age and education distributions vary by racial background.

While such interrelationships highlight the role of socioeconomic factors in infant health, they also

imply that solutions may require developing different strategies for different subpopulations.

Low birth weight is the single greatest problem associated with infant mortality and the principal determinant of neonatal death (5). Reducing neonatal mortality depends on providing appropriate levels of care for women in early labor and small newborns and on reducing the frequency of low birth weight (6-8). In addition to reducing the chance of infant survival, low birth weight has other medical and economic implications including protracted illness and costly hospitalization during infancy and long-term neurologic and developmental handicaps (5).

Advances in obstetrical interventions and neonatal care have greatly improved the survival of small neonates (9) and are largely responsible for the 56-per cent nationwide decline in neonatal mortality between 1960 and 1980 (5,10). Although many areas have organzied these services into regional systems (11), high-level care may not be uniformly available (12), and closer examination of high-risk pregnancy and small baby referral patterns in West Virginia could identify regions where opportunities to optimize perinatal care still exist.

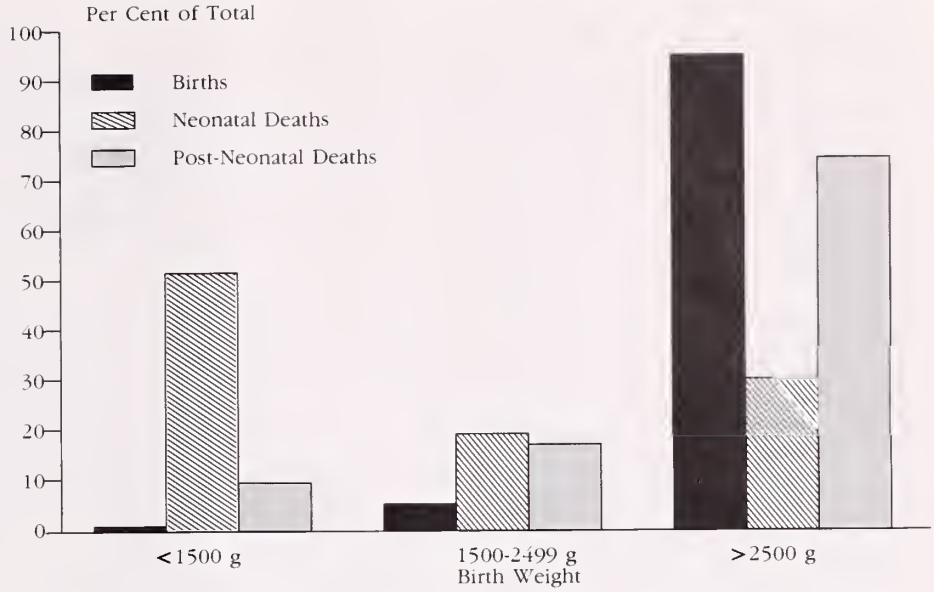

Figure 2. Births and infant deaths, by birth weight, West Virginia birth cohort, 1979-1983.

Several observations, however, indicate that intensive hospital management is not the ultimate solution to neonatal mortality: First, the downward neonatal mortality trend, associated mainly with improved survival of high-risk infants (10), has shown recent signs of slowing (5); second, a high prevalence of low birth weight is the primary source of excess neonatal risk associated with high-risk groups (young or poorly educated mothers and blacks), and third, recent evidence suggests that improved neonatal survival through costly technology may now be postponing rather than preventing some infant deaths (13, 14). Since infants who weigh <2500g still constitute 70 per cent of the neonatal deaths, it is generally acknowledged that preventing low birth weight holds the greatest potential for further decline in neonatal mortality (5, 10).

Our findings are consistent with other studies that suggest inadequate prenatal care increases the risk for delivering small infants (15, 16). Moreover, women who delay prenatal care or who receive no care at all are likely to miss screening and therapy for high-risk conditions, and may not receive indicated referral to tertiary centers (12, 15). The high frequency of low birth weights among blacks, teen mothers and women with less education is consistent with their underutilization of prenatal care, a reflection of social and economic disadvantage. Efforts to reduce low birth weight must include a commitment to enroll all pregnant women in prenatal care (6), and to reduce the

TABLE 3

Crude and Adjusted Relative Risks for Infant Death Associated with Selected Characteristics. 1979-1983 West Virginia Single-Delivery Birth Cohort.

	Relative Risk			
	Neonatal		*Postneonatal*	
Characteristic	*Crude*	*Adjusted*	*Crude*	*Adjusted*
Race*				
Black	1.8	1.1	1.6	1.3
White (Referent)	1.0	1.0	1.0	1.0
Maternal Age (years)*				
<20	1.6	1.1	2.3	2.0
20-24	1.2	1.0	1.3	1.2
25-29 (Referent)	1.0	1.0	1.0	1.0
≥30	1.1	0.9	1.1	1.1
Maternal Education (years)*				
<12	1.8	1.1	4.1	3.5
12-15	1.3	1.0	1.5	1.3
≥16 (Referent)	1.0	1.0	1.0	1.0
Live Birth Order ±				
First (Referent)	1.0	1.0	1.0	1.0
Second	0.8	0.9	1.1	1.5
Third	0.8	1.0	1.6	2.7
Fourth or higher	0.8	1.0	1.8	3.1

*Crude relative risks were adjusted by birth weight
± Crude relative risks were adjusted by maternal age

TABLE 4

Number and Per Cent of Deaths for all Infants, Neonates, and Postneonates by Birth Weight and Underlying Cause. 1979-1983 West Virginia Single-Delivery Birth Conhort.

	Birth Weight							
	<2,500g		*≥2,500g*		*Unknown*		*Total*	
Cause of Death	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*
All Infants								
All Causes	804	(53.9)	656	(43.9)	33	(2.2)	1493	(100.0)
Perinatal conditions	530	(35.5)	102	(6.8)	22	(1.5)	654	(43.8)
Congenital anomalies	142	(9.5)	193	(12.9)	8	(0.5)	343	(23.0)
SIDS	34	(2.3)	168	(11.3)	0	(0.0)	202	(13.5)
Infections	35	(2.3)	68	(4.5)	1	(0.1)	104	(7.0)
External causes	6	(0.4)	36	(2.4)	0	(0.0)	42	(2.8)
Non-specific & unknown	16	(1.1)	14	(0.9)	1	(0.1)	31	(2.1)
All others	41	(2.7)	75	(0.5)	1	(0.1)	117	(7.8)
Neonates								
All causes	668	(68.2)	281	(28.7)	31	(3.2)	980	(100.0)
Perinatal conditions	497	(50.7)	88	(9.0)	20	(2.0)	605	(61.7)
Congenital anomalies	115	(11.7)	127	(13.0)	8	(0.8)	250	(25.5)
Infections	25	(2.6)	21	(2.1)	1	(0.1)	47	(4.8)
SIDS	2	(0.2)	17	(1.7)	0	(0.0)	19	(1.9)
Non-specific & unknown	13	(1.3)	3	(0.3)	1	(0.1)	17	(1.7)
External	3	(0.3)	1	(0.1)	0	(0.0)	4	(0.4)
All others	13	(1.3)	24	(2.4)	1	(0.1)	38	(3.9)
Postneonates								
All causes	136	(26.5)	375	(73.1)	2	(0.4)	513	(100.0)
SIDS	32	(6.2)	151	(29.4)	0	(0.0)	183	(35.7)
Congenital anomalies	27	(5.3)	66	(12.9)	0	(0.0)	93	(18.1)
Infections	10	(1.9)	47	(9.2)	0	(0.0)	57	(11.1)
Perinatal conditions	33	(6.4)	14	(2.7)	2	(0.4)	49	(9.6)
External causes	3	(0.6)	35	(6.8)	0	(0.0)	38	(7.4)
Non-specific & unknown	3	(0.6)	11	(2.1)	0	(0.0)	14	(2.7)
All others	28	(5.5)	51	(9.9)	0	(0.0)	79	(15.4)

prevalence of other maternal risk factors such as poor nutrition, smoking and alcohol use during pregnancy (16). Helping teenagers and other high-risk groups avoid unintended pregnancy is an important component of the overall strategy to reduce low birth weight.

Although the increased risk associated with low birth weight extends throughout infancy, the magnitude diminishes sharply after the first month of life, and survival in the postneonatal period is not as closely linked with birth weight as it is in the neonatal period. After accounting for birth weight, postneonatal mortality gaps between high-and low-risk groups persist (Table 3), reflecting survival differences among normal-birth-weight infants (not shown in text). Such differences among infants not compromised by low birth weight suggest the role of environmental factors in postneonatal death including inadequate parenting skills, substandard living conditions, and unavailability or underutilization of basic pediatric care.

Because the majority of postneonatal deaths involve infants who weigh ≥2500g at birth, strategies to reduce postneonatal mortality must not be limited to low birth weight control, and need to address leading causes of preventable death in normal-birth-weight infants such as communicable diseases and injury, and advance our understanding of birth defects and SIDS. In addition, because increased postneonatal risk is associated with teenage motherhood and high parity, interventions should include programs that enhance parenting skills in young parents (17) and provide adequate family planning services to assist in restricting family size.

Despite declining teenage pregnancy, the rate of adolescent childbearing in this country is one of the highest in the industrialized world (18), and remains an important public health problem. In West Virginia, where the teenage fertility rate is among the highest in the nation (West Virginia Department of Health), we note with concern that teenage deliveries account for 27 per cent of all low birth weight and for 28 per cent of all infants who die. Thus, the high risks that attend teenage childbearing and the large fractions of infant morbidity and mortality attributable to teens justify special attention to the problems of teenage conception and motherhood. Needs to support pre-

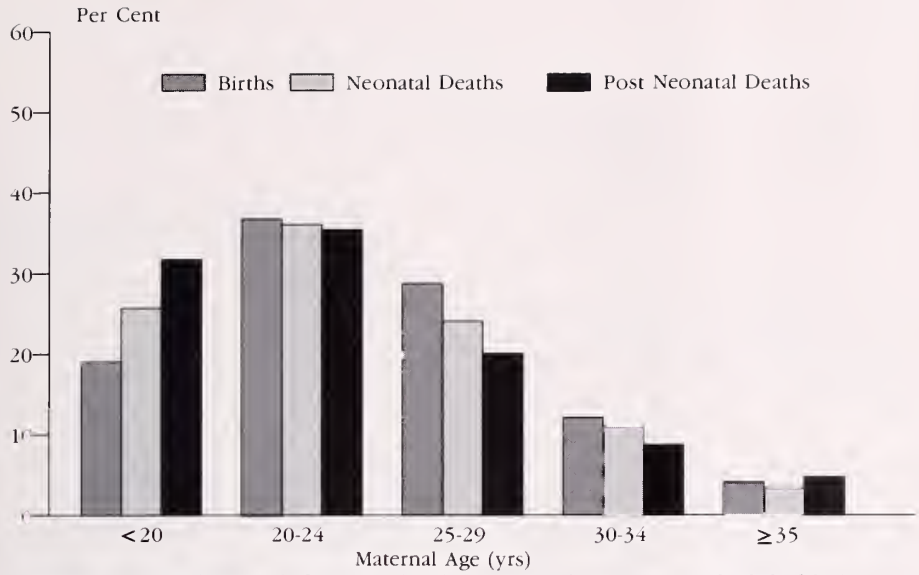

Figure 3. Births and infant deaths, by maternal age, West Virginia birth cohort, 1979-1983.

and postnatal care for teen mothers and to reduce unintended pregnancy have been discussed in detail by a special State Task Force (19).

Conclusion

In conclusion, birth and infant death certificate linkage provides a powerful tool for understanding infant mortality. By illustrating population variables and underlying health conditions associated with preventable death, linked records can assist health planners in identifying problems and targeting populations that require special assistance.

Separate analysis of neonatal and postneonatal death reveals that different strategies are necessary to address these conventional components of infant mortality. In the broadest sense, neonatal mortality is most strongly influenced by prenatal factors that contribute to low birth weight and by perinatal technologies that affect the survival of high-risk newborns. Postneonatal mortality, on the other hand, is more closely related to environmental factors responsible for the health and safety of children who survive the neonatal period (20).

Overall, the strong correlations between infant mortality and characteristics associated with unhealthy behaviors, substandard home environments, and lack of access to clinical services clearly imply that programs which target high-risk populations need to overcome existing economic and social barriers to maternal and infant health.

Analyses of the 1979-83 birth cohort have been used to highlight program needs and to develop support for West Virginia's Maternal and Child Health programs. In addition to information presented in this paper, data from the cohort file have illustrated county and regional differences within the state (West Virginia Department of Health), unmasked and identified reasons for survival discrepancies between West Virginia and a nationwide birth cohort (Baron R., unpublished data) and served as the scientific basis for a 1987 consensus and coalition-building conference.

Other states have linked birth cohort files to WIC, Medicaid and hospital discharge files, enabling evaluation of pregnancy outcomes by social programs, by provider care, and by the presence of maternal or neonatal complications (21).

Finally, for the purposes of monitoring trends, evaluating program achievements and redefining goals, matched birth and infant death certificate files should be analyzed routinely and used regularly in planning and decision-making.

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President's Page

Lois Spencer

"If your spouse is not a member of the Auxiliary, we seek your cooperation in encouraging him/her to join."

Get It Done

Guest author: Mrs. Lois Spencer (Edward M.), Bluefield, President, West Virginia State Medical Association Auxiliary

The purposes of the West Virginia State Medical Association Auxiliary according to its Bylaws are as follows:

- to assist in those programs of the West Virginia State Medical Association that improve the health and quality of life for all people;
- to uphold the programs of the American Medical Association Auxiliary;
- to promote health education;
- to encourage participation of volunteers in activities that meet health needs;
- and to support health-related, charitable endeavors.

As a leader of an organization with the above-stated purposes I am looking forward to confronting the challenges explicitly mandated therein. It is obvious that the medical profession is being attacked from many quarters and therefore faces significant problems in the future. The Auxiliary has always been involved in issues dealing with the health of the people and the concerns of the medical profession, but the potential that exists within the Auxiliary has barely been tapped. We must begin to work together if we are going to confront these problems.

We in the Auxiliary are looking forward to cooperating with the West Virginia State Medical Association in both the planning and executing of short-term and long-term projects as together we develop an effective program to meet the challenges that will face Medicine in the next decade and on into the next century.

As Medicine faces the future, being part of an organization with the above-stated purposes becomes even more important than it was in the past. As a society places more demands on everyone's time, becoming a part of an organization such as the West Virginia State Medical Association Auxiliary becomes a challenge to each eligible individual. We have a critical need at present to increase membership. If your spouse is not a member of the Auxiliary, we seek your cooperation in encouraging him/her to join.

"Strength Through Unity" is my theme for the year, for only if we present a unified front can we have the strength to face the problems facing Medicine and fulfill the purposes of our organizations.

I would like to close this article the same way I closed my acceptance speech at the Convention in August. My closing paragraph at that time included a quotation by Alfred, Lord Tennyson that goes as follows: "The world which credits what is done is cold to all that might have been." My challenge to everyone is to go out there, work together, and get it done.

Bankruptcy

If West Virginia were a business, it would have been in Bankruptcy Court years ago. This is nowhere better demonstrated than in the pathetic attempts West Virginia now makes to fund medical care.

Last year the State managed to get six months or more in arrears in payables to hospitals, doctors and other providers, causing in many cases severe if not catastrophic consequences. The Governor, in a magnanimous gesture, promised to pay up providing those awaiting payment would accept 90 cents on the dollar as payment in full. Many accepted out of fear that otherwise they would get nothing.

The new wrinkle this year is that the Medicaid group and other indigents are lumped together with the teachers and other public employees to constitute a homogenized mass to be allotted sparse amounts of inadequate medical insurance coverage. It is certainly generous of the teachers and other state and municipal employees to share their already thin resources with those having even less, but the results are unlikely to please anyone. Widespread concerns and complaints are being heard even before the new PEIA program has gotten under way. It occurs to us that this lumping of disparate groups together for medical insurance purposes is nothing more than a way of levying a special tax on that part of the group better fixed financially.

It is certainly likely that delays in payment will resurface this year. And it is certain that problems in cash flow will force some hospitals, other medical care institutions and some individual providers over the financial brink. There will be hospital and nursing home closings and medical practitioners leaving the state. There are some in our present state administration who would, perhaps, look upon such losses as having an overall salutary effect on the State's problem with its revenues resulting from fewer providers making fewer demands on those revenues. We sincerely doubt that West Virginia citizens would regard such losses as having a salutary effect on their health.

Some, at this point, might opt for a bankruptcy solution by the State. We have heard members of both political parties say that the West Virginia tax base cannot generate sufficient revenue to meet the obligations to which this and other administrations have committed the State. Our Governor sold himself to the voters of this State as a hard-nosed business man, and bankruptcy is not a solution alien to hard-nosed business men.

One thing is sure. The medical care industry cannot by itself pay the penalty resulting from present and past profligacy of our political leaders. If there is to be further fiscal suffering by those providing goods and services to West Virginia, some method must be found for sharing that suffering with bankers and bond holders, teachers and other State employees, attorneys and plumbers and all others having a long-term interest in the State.

If the alternative to bankruptcy is loss of our medical institutions and emigration of our skilled medical care providers, the political choice is a foregone conclusion. West Virginians along with other Americans name medical care as their highest priority in any list of things they value. Politicians will jeopardize the medical care of their constituents at the risk of their political lives. We know politicians whose political demise would be a blessing to their own constituents among others but we know of none so actively suicidal that he would make the fatal choice between these alternatives.—SDW

Senator Rockefeller

We rarely pass up the opportunity to criticize our political leaders over their inept or short-sighted handling of medical problems which come before them. Rarely do we get the opportunity to compliment a politician for his good sense and good judgement in such affairs.

It comes as a pleasure then to be able to point out and to praise the recent activities of Senator Rockefeller in the Senate Finance Committee and on the floor of the Senate dealing with critically important matters pertaining to Medicine.

Confounding the administration plan to impose rigidly controlled Expenditure Targets on the provision of medical care, Senator Rockefeller led the Committee members and later the entire Senate to reject both the Administration and the House-passed plans which called for automatic fee adjustments if targets are not met. The Rockefeller plan will deprive

regulators of arbitrary powers to set medical fees among other things.

Several of the other modifications promoted by AMA and won by Senator Rockefeller might be described as technical in nature. In summary, however, the Senator's work reflected an acknowlegement of Medicine's legitimate interest in the legislation and its effects, and an awareness and recognition on his part that no system of medical care newly devised or freshly modified is ever going to be workable without the active support and participation of physicians.

Senator Rockefeller is a man whose support is not easily won. We disagreed with him on several occasions while he served as Governor of West Virginia. In this instance our desires were not totally met by any means. Our need to be heard was met, however, and we have every confidence that when we can be heard, our arguments will be persuasive.

We congratulate Senator Rockefeller on the form that he is showing as a statesman and a leader in the United States Senate.—SDW

Our Readers Speak

Medicaid Liability Coverage Supported

I was interested to note a WVSMA Legislative Committee proposal to provide medical liability coverage by the state to all physicians who provide medical services to Medicaid patients and to qualified retired physicians who care for the indidgent. Approximately 25 to 30 per cent of my practice is Medicaid based, and I have found this to put a severe strain on my cash flow, especially when the State of West Virginia is delinquent in their payments, as occurred last year. I feel that ceasing to accept Medicaid is a disservice to my patients since I live in a very poor and rural area of West Virginia. I also consider it somewhat unethical that more physicians do not accept Medicaid as these people need and deserve medical care just as much as the insured patient.

Therefore, I wholeheartedly support the proposal for providing Medicaid liability coverage to all physicians who provide Medicaid services. This would help keep me in practice from an economic standpoint and permit me to maintain or even expand the Medicaid-based services I provide. As you know, medical liability insurance is a significant fixed cost to any medical practice. Not only is it burdensome for the obstetrician, but it is also a burden on the small solo family practitioner such as myself. I hope that your legislative proposals are accepted and heard by this year's Legislature. If you need any help in lobbying for this bill in the State Capitol, please let me know. I am located only one half hour from Charleston, and would gladly go to go to any Legislative Committee sessions where my views could be heard.

If I can be of any help in any way, please let me know.

J. Philip Hall, M.D.
P.O. Box 892
Clendenin, WV 25045

Editor's Note: State-provided medical liability insurance to cover obstetric services to Medicaid patients would be expanded to cover all physicians treating Medicaid patients in a resolution approved by the WVSMA House of Delegates in August. The WVSMA Legislative Committee has dealt with the matter and will have legislation prepared to comply with the resolution.

Kudos

Thanks for keeping me on the subscription list for the *Journal*. I enjoy staying in touch with West Virginia medicine from my vantage point in Alabama.

I am writing to add my kudos to those of the Association honoring the service of Mary Hamilton. In my 10 years of work in Continuing Medical Education at West Virginia University School of Medicine, I found Mary to be more than just efficient, friendly, and helpful. She was a major behind-the-scenes force in continuing medical education planning and development at the state level. Dr. Bill McMillan and others on the Committee on Medical Education and Hospitals would likely have had a very difficult time developing such an enviable record of achievement in CME without Mary. Indeed, the practicing physicians in West Virginia owe a debt of gratitude to Mary for her longstanding and skillful dedication to the educational goals of the West Virginia State Medical Association.

My best wishes to Mary and to all at the Association.

Robert E. Kristofco
Associate Director
Division of Continuing Medical Education
127 Community Health Services Building (20th Street)
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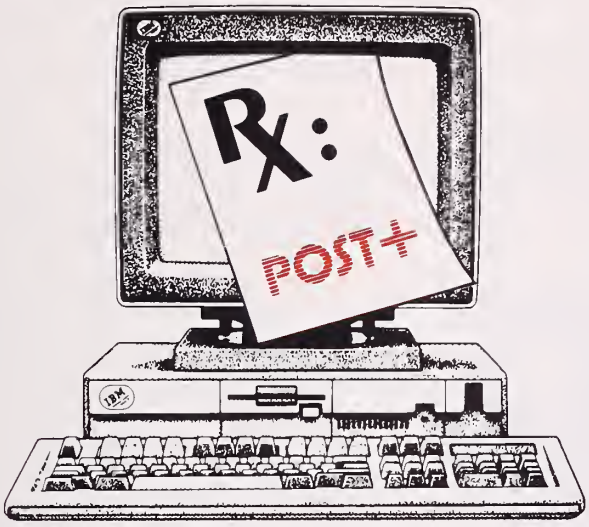

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Adolescent, Lasers, Asbestos Exposure, Immunizations, Aging Set for 'Mid-Winter'

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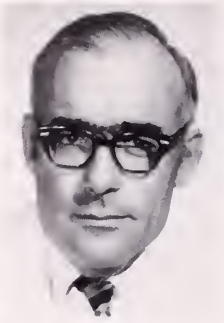

Bogdonoff

Subjects ranging from the adolescent to aging emerged as a number of speakers for the 23rd Mid-Winter Clinical Conference were announced by the Program Committee.

Other topics being announced include lasers, asbestos exposure and immunizations.

The weekend CME event, to be held January 26-28 in Charleston at the Holiday Inn Charleston House, will begin Friday afternoon, January 26, and continue through Sunday morning until noon.

The program is sponsored by WVSMA, with Marshall University and West Virginia University schools of medicine as co-sponsors.

The Friday afternoon session will cover "Adolescent Health;" Saturday morning, "Potpourri of Topics;" Saturday afternoon, "Immunology Update," and Sunday morning, "Aging Process."

Speakers Announced

The presentations currently being announced include:

"CVD Risk Factors of the Adolescent," Friday afternoon, Michael J. Lewis, M.D., Chairman, WVU Department of Family Medicine;

"Lasers in Medicine, An Overview," Saturday morning, Tara C. Sharma, M.D., Chief of Urology, Cabell Huntington Hospital; and Clinical Professor of Urology, Department of Surgery, MU School of Medicine;

"Health Effects of Low-Level Asbestos Exposure," Saturday morning, Daniel E. Banks, M.D., Associate Professor of Medicine and Chief, Section of Critical Care and Pulmonary Medicine, WVU School of Medicine;

"Update on Immunizations, Especially Measles," Saturday afternoon, James E. McJunkin, M.D., Associate Professor and Chairman, Department of Pediatrics, WVU Health Sciences Center, Charleston Division;

"The Normal Physiology of Aging," Sunday morning, Morton D. Bogdonoff, M.D., Professor of Medicine and Co-Director, Division of Geriatrics, Department of Medicine, New York Hospital, Cornell University.

Reception, Concurrent Sessions

A reception for members of the West Virginia Legislature is being planned for 6-7 P.M. Thursday, January 25, preceding the opening of the conference.

The traditional Friday evening Physicians' Session will be on "Quality Assurance for Physicians—Practice Guidelines" while "Toxics in Your Environment: Home/ Community/ Air/Schools/Public Buildings" will be the topic for the concurrent Public Session.

The Speakers

Doctor Lewis, a member of WVSMA's Council, is Secretary of the West Virginia Chapter, American Academy of Family Physicians. He received a B.S. degree in chemical engineering from West Virginia Institute of Technology, M.S. and Ph.D. degrees in chemical engineering from Virginia Polytechnic Institute and State University, and his M.D. degree in 1974 from WVU.

Doctor Lewis also is Medical Director, Medical Access and Referral System (MARS) at WVU School of Medicine, Co-Chairman of the WVSMA Loss Control Committee, and Chairman of the Board of Directors, WVU Medical Corporation.

Doctor Sharma, a native of India, is President Elect of the Cabell County Medical Society. He received his medical degree in 1960 from Medical College Amritsar, Panjab, India, and completed his internship and residency in India.

In this country, he completed an internship and residency in surgery, and a residency in urology at Washington (D.C.) Hospital Centre; and was a special fellow in urological oncology at Memorial Hospital for Cancer and Allied Diseases in New York City (1968-70).

Doctor Sharma has been closely involved with cancer education programs for the public including participation in such programs on local public and commercial television stations. He is a member of the Board of Directors of the West Virginia Division of the American Cancer Society.

Doctor Banks, a native of Detroit, also is a staff physician at the Veterans Administration Medical Center in Clarksburg.

He was graduated from Oakland University in Rochester, Michigan, and received his M.D. degree in 1975 from Wayne State University in Detroit.

Doctor Banks served his internship and residency in internal medicine at Louisiana State University School of Medicine, Charity Hospital of Louisiana at New Orleans, and completed his post-doctoral education in occupational medicine and pulmonary diseases at the National Institute for Occupational Safety and Health and WVU in Morgantown.

He is the author or co-author of 30 abstracts, 24 scientific articles and four book chapters, and is a reviewer for *CHEST* and *American Review of Respiratory Disease.*

Doctor McJunkin was graduated from Princeton University, and received his M.D. degree in 1977 from WVU. He took his residency in pediatrics at Thomas Jefferson University Hospital in Philadelphia, and was recipient of a Robert Wood Johnson Fellowship in the General Pediatric Academic Development Program at Children's Hospital of Philadelphia.

Before joining the WVU faculty in Charleston in 1987, he was senior staff physician, Comprehensive Child Health Program, The Children's Hospital of Boston, and instructor in pediatrics at Harvard Medical School.

He is Guest Editor for *Clinical Pediatrics,* and is the author or co-author of nine scientific articles.

Doctor Bogdonoff, a graduate of Cornell University Medical College, was trained at The New York Hospital, The National Heart Institute, and at Duke University Medical Center. After developing a laboratory and training program in metabolic research at Duke, he went to the University of Illinois in Chicago as Chairman of the Department of Medicine. After nearly a decade he returned to New York to his present position.

He has served as Chief Editor of *Clinical Research* and the *Archives of Internal Medicine,* and is now Senior Editor for *Drug Therapy.* He is author of many scientific papers in metabolism and cardiology, and also has written extensively on medical education and medical care.

At present, he is a consultant for The Commmonwealth Fund and The Robert Wood Johnson Foundation.

Other Topics

The opening session on "Adolescent Health" also will include papers on eating disorders and drugs/alcohol. As announced earlier, "Adolescent Pregnancy in West Virginia" will be discussed by Nancy J. Tolliver, R.N., M.S., of Charleston, Director, Office of Community Health Services, West Virginia Department of Health and Resources, Division of Health.

Also to be covered during the Saturday morning potpourri of topics will be mammography and another subject as yet unconfirmed. "New or Contemporary Treatment of Congestive Heart Failure," as previously announced, will be the subject of the talk by Robert C. Touchon, M.D., Professor of Medicine and Physiology, MU School of Medicine.

Other Saturday afternoon topics ("Immunology Update") will include desensitization, selecting the right NSAID, and tests (ANA, SED rate, etc.) while the Sunday morning program on the "Aging Process" also will look at pharmacology, nutrition and injuries: treatment of falls.

Registration

The conference registration fee is $75, with checks to be made payable to WVSMA and mailed to WVSMA at P.O. Box 4106, Charleston, WV 25364. There is no fee for residents, medical students and nurses. The fee for non-members is $100.

The Holiday Inn Charleston House is offering a special room rate of $61 (single or double). Specify WVSMA when making reservations to obtain the special rate. Physicians outside the Charleston area who register with WVSMA in advance of the Conference dates will receive a room reservation form for the Charleston House Holiday Inn. When returning the form, be sure to list "WVSMA" on the "group name" line.

For additional information, contact Nancie Divvens or Patty Barnhart (304) 925-0342 or 1-800-257-4747 (WV).

1989 officers and some of the Councilors of the West Virginia Chapter, American College of Surgeons, are, first row, from left, Drs. Roger King, Morgantown, Secretary/Treasurer; Eric Mantz, Charleston, Second Vice President; Thomas Chang, Clarksburg, President; Verne McConnell, Wheeling, First Vice President, and Herbert Warden, Morgantown, Governor; second row, James Durig, Wheeling, Past President, and Councilors: Gene Duremdes, Princeton; Catalino Mendoza, Clarksburg; Stanley Kandzari, Morgantown, and Carl Kite, Wheeling. The Chapter holds its annual Spring Meeting at the Greenbrier in White Sulphur Springs.

Doctors attending the public hearing on the rules for implementing SB-576 October 8 at the Capitol in Charleston have an informal discussion following the hearing with Delegate Pat White, D-Putnam (seated, back to camera), Co-Chairwoman of the Joint Legislative Committee on Health Care Services and Payments, sponsor of the hearing. Others present (foreground) also discuss the issues.

WVSMA President Derrick L. Latos, M.D., was the first of 26 people to make a statement at the hearing.

Physicians Make Statements on SB-576 Rules at Capitol

Some 30 physicians from throughout West Virginia attended the public hearing concerning rules to implement SB-576, the Omnibus Health Care Act, on Sunday, October 8, at the Capitol in Charleston.

WVSMA President Derrick L. Latos, M.D., of Wheeling, was the first of eight physicians to speak concerning the rules, and prefaced his remarks with a statement that WVSMA strongly opposes the law and will work diligently toward its repeal (see WESGRAM, October 10).

The hearing was sponsored by Delegate Pat White, D-Putnam, and Sen. Charlotte Pritt, D-Kanahwa, Co-Chairwomen of the Joint Legislative Committee on Health Care Services and Payments, and held in the House Chamber of the Capitol.

Physicians Testifying

Other physicians testifying were Edward F. Arnett, Martinsburg; Jerome C. Arnett, Jr., Elkins; Philip Branson, Princeton; Ahmad Faheem, Beckley; James D. Helsley, Berkeley Springs; Lee L. Neilan, Charleston, and John A. Wade, Jr., Point Pleasant.

Doctor Latos' remarks highlighted a detailed written state-

ment which he left with the joint committee. His major points were:

- Under the "take one, take all" provisions and the 15-per cent Medicaid patient requirement, a potential invasion of privacy and breach of physician/patient privilege exists if the state attempts to enforce this requirement by examining a physician's patient list, in particular non-state patients.
- The emergency and on-call exceptions for the "take one, take all" provisions should be expanded to include cross-coverage arrangements among physicians.
- Under the rules regarding physician non-participation or withdrawal from seeing patients, language changes to interpret the law correctly on notifying the state are required.
- Under the rules interpretation of assessing civil penalties ranging from $1,000 to $25,000 for "each" violation, deletion of the word "each" is urged because WVSMA believes the law contemplates the assessment of one penalty in any hearing in which one or more violations of the act have been committed.
- Although not a part of the emergency rules, the 80th percentile fee schedule implemented by PEIA September 15 has created a need for physicians to receive guidance from the state agencies on billing procedures, what amount can be charged a patient, and how to bill.

Other Speakers

Twenty-six people spoke at the hearing. In addition to physicians, they included representatives from state agencies, state employees' unions, the President of the West Virginia Education Association, and one PEIA beneficiary concerned over losing the physician of her choice because of SB-576.

Doctor Wade said that during a one-month survey of patient bookings in his office, approximately 31 per cent were for Medicaid patients; about one third of those did not show up. For that reason, the 15-per cent requirement should be applied only to "scheduled" patients, not treated patients, he said.

Dr. Jerome Arnett said there should be a "clear and compelling burden of proof" on the Division of Human Services when charging participating physicians with infractions of the Medicaid patient requirement.

Doctor Helsley said, "I know you find it too hard to feel any remorse for doctors who sing sob stories. There is no war between doctors and patients. I'm here to help, and I certainly wish the Legislature would help by implementing the rules fairly."

Health Conscious

Charleston residents are becoming more health-conscious. The results of this year's CountDown USA cholesterol screening sponsored locally by Charleston Area Medical Center, One Valley Bank and HealthPlus Urgent Care indicate 44 per cent of those screened have cholesterol levels in the desirable range.

Of more than 310,000 people tested across the country, only 37 per cent tested in the desirable range. More than 900 local residents participated in testing at five sites.

Correction

Language inadvertently was retained by mistake in Amendments, Constitution and Bylaws, October Journal, Page 465. Under "C-3 (Approved)," column 2, all language relating to "associate" membership should have been deleted.

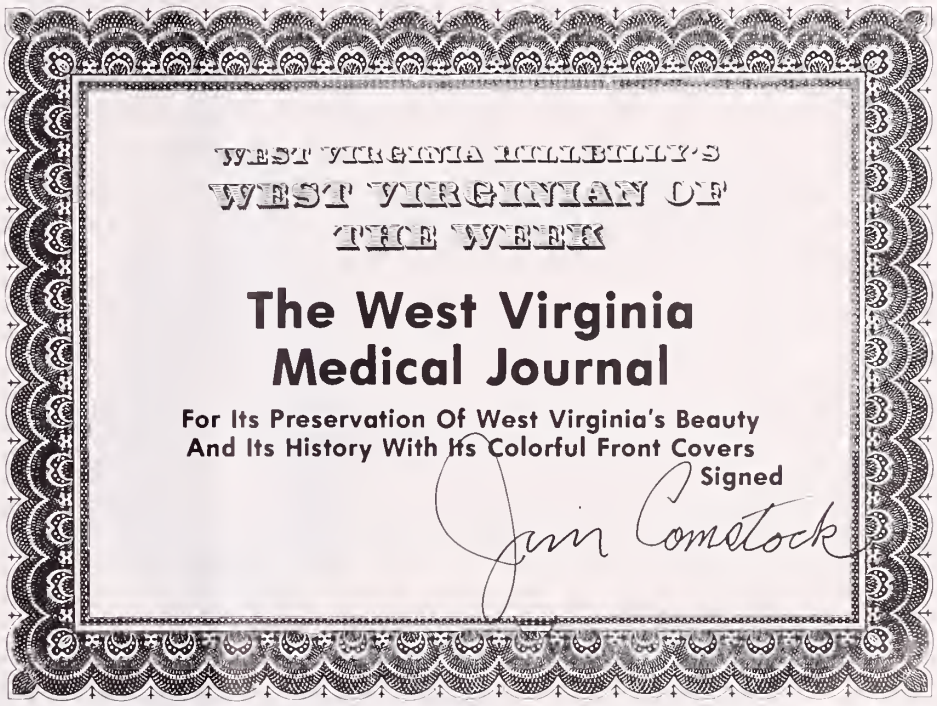
The purpose of the amendment is to eliminate the "honorary" category of membership, and all references to "associate" membership should be stricken.

The copy under "C-3 (Approved)" on Page 465 should have read:

"Amend ARTICLE IV.—COMPOSITION—Sec. 1, by deleting the word, 'honorary'.

"The sentence would now read, 'This Association shall consist of active, retired, resident and student members.'

"(Note: The purpose of this amendment is to simply delete the word, 'honorary,' which inadvertently was overlooked when in 1987 an amendment was passed to eliminate the category of honorary membership.)"



The above certificate recently sent to the Journal is self-explanatory. Our covers are made possible through photos supplied by Wonderful West Virginia Magazine and the West Virginia Department of Commerce. Our thanks to Jim Comstock, Editor of the West Virginia Hillbilly!

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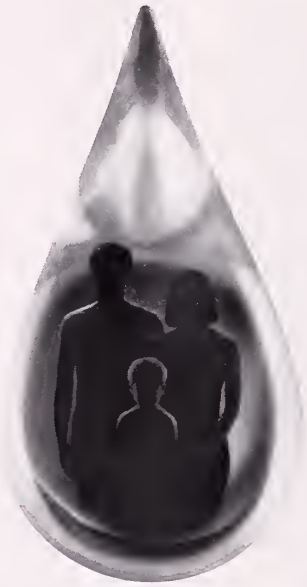
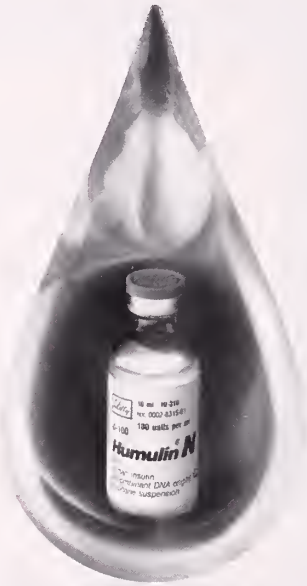


With Human Insulin



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Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Judith A. Bradle, Program Manager, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Bradle, (304) 347-1363; and Hall, (304) 348-9580.

CAMC/WVU-Charleston Division

Nov. 7, Withdrawal of Life Support Measures (7:30 P.M., Thomas W. Mou Lectureship Speaker: Alan Meisel, J.D.)

Nov. 8, Faculty Research Day

West Virginia University, Morgantown

Nov. 11, Women's Health Issues*

Nov. 17-19, Hypnosis Workshop

*In conjunction with WVU football games

CME Outreach Programs

Key to Sponsors

★ WVU Health Sciences Center, Morgantown

☐ WVU Health Sciences Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Cabin Creek, ☐ Cabin Creek Medical Center, 8:30 A.M.—Nov. 16, ER Poison Management, Gregory Wedin, Pharm. D.

Gassaway, ☐ Braxton County Memorial Hospital, 6:30 P.M.—Nov. 1, ER Poison Management, Gregory Wedin, Pharm. D.

Grantsville, • Calhoun General Hospital, 1:30 P.M.—Nov. (no program)

Hurricane, • Putnam General Hospital, 7 P.M.—Nov. (no program)

Logan, • Logan General Hospital, 11:30 A.M.—Nov. (no program)

Madison, ☐ Boone Memorial Hospital, 6:30 P.M.—Nov. 14, ER Poison Management, Gregory Wedin, Pharm. D.

Man, • Appalachian Regional Hospital, 7 P.M.—Nov. 21 (tba)

Montgomery, • General Hospital, 12 P.M.—Nov. 1, Diabetic Retinopathy, Mark Hatfield, M.D.

New Martinsville, ★ Wetzel County Hospital, 1 P.M.—Nov. 23 (tba)

Oak Hill, ☐ Plateau Medical Center, 7:30 P.M.—Nov. 9, Infectious Waste, Elizabeth Funk, M.D.

Parkersburg, ★ Camden-Clark Hospital, 7 A.M.—Nov. 8, Pneumonias With Underlying Conditions, Beecham Labs

Ripley, • Jackson General Hospital, 12:30 P.M.—Nov. 10, Using Lasers in Surgery, Romeo Lim, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Nov. 21 (tba)

Summersville, ☐ Summersville Memorial Hospital, 6 P.M.—Nov. 7, Pediatric Emergencies, J. Michael Waldeck, M.D.

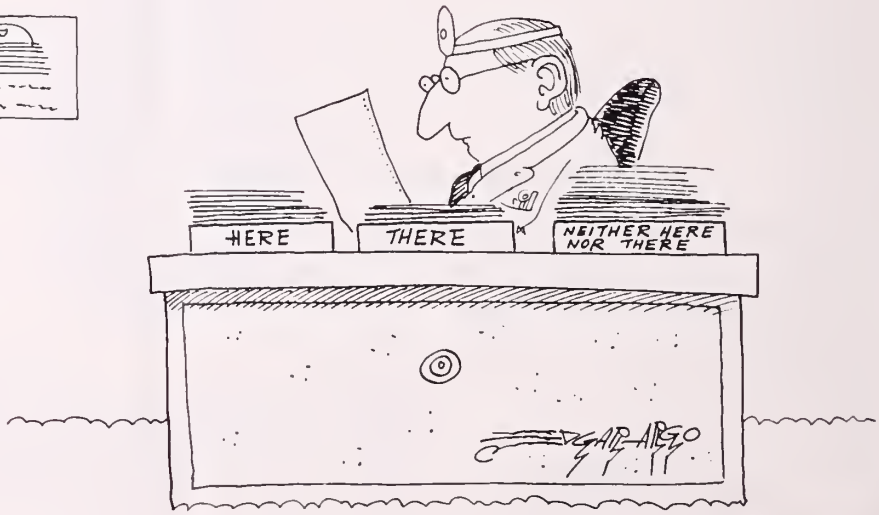
Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Nov. 20 (tba)

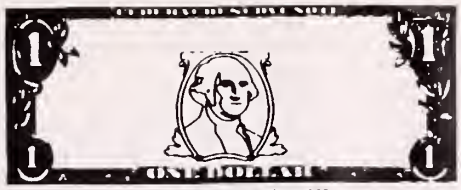
Wheeling, ★ Ohio Valley Medical Center, 8 A.M.—Nov. (tba)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Nov. 29, Polypharmacy in the Elderly, David Elliott, Pharm. D.

White Sulphur Springs, ☐ Greenbrier Clinic, 4 P.M.—Nov. 21, Sun-Related Dermatosis, Kimberly Skaff, M.D.

Williamson, ☐ Williamson Memorial Hospital, 6:30 P.M.—Nov. 30, Common Dermatologic Problems, Donald E. Farmer, M.D.





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Highlights

Highlights

"Adolescent Health"

"Potpourri of Topics"

"Immunology Update"

"Aging Process"

Mark Your Calendar

Look for Updates in Coming Issues of the West Virginia Medical Journal and Wesgram

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ADVANCE REGISTRATION

Please register me for the 23rd Mid-Winter Clinical Conference January 26-28, 1990 at the Holiday Inn—Charleston House in Charleston.

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Please make check payable to WVSMA, and mail to WVSMA, P.O. Box 4106, Charleston, WV 25364

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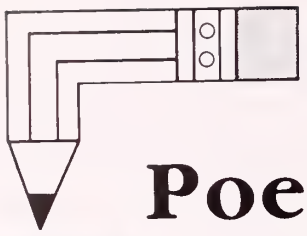
*There is no registration fee for residents, medical students and nurses. Registration fee for non-members of WVSMA is $150.



Poetry Corner

Pain and Empathy

For years I treated those
Who came to me for care
Of illness, pain and fear;
And tried my best to understand
What they were going through.

I talked with them—a history;
And ordered tests to find
What underlying problems
Might make them feel this way.
I treated them and sympathized.

One day, my turn—the other side;
The pain grew day by day.
It grew severe and froze me;
Excruciating pain with fear.
What's going on? What is this
thing?

I sought the help I knew was there
From those with whom I'd worked.
They cared for me with love
And understood my needs.
They saw my pain and sympathized.

The caring touch they gave
Soothed my fear and pain;
Made me feel at ease.
I put my trust in them
And let them have their way.

As healing came and pain let go
I sensed that something more
Was present in the care we gave;
In them, in me, our caring showed
We also loved and sympathized.

E. Leon Linger, M.D
Buckhannon

A Night In I.C.U.

I tell myself
With bated breath
Through parted lips
That I could die
That I could die.

With real dismay
And entwined fingers
I plead my case
But the truth my dear is
We all must go
We all must go

Freudian dreams and fears-to wit
Can neither slow or hasten it
Your time will come, ye ken
But few know when
Yeah few ken when.

. . . AND A DAY

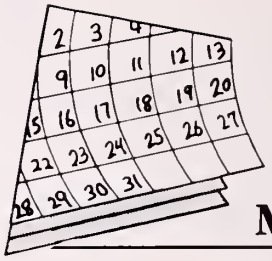
It's morning already
The birds have risen
All's right on the earth
God is in his heaven

Breakfast is here it tastes so good
I CAN'T SIT UP???
But I feel so good
NO SALT?? I CAN'T SMOKE????
YOU GOTTA BE KIDDING . . .

Look at the angels
White angels in the air
Angels in the hall
Angels everywhere
And it's good to be living

J. Paul Aliff, M.D.
Scott Depot

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.



Medical Meetings

November

3-4—Am. Academy of Pain Medicine, Dallas.

4—Eye & Ear Laser Surgery Seminar VI, Eye & Ear Clinic of Charleston, Inc., Charleston.

4—AMPAC Candidates Workshop, St. Louis.

5-8—Southern Medical Assoc., Washington, D.C.

12-17—AMPAC Campaign Management School, Washington, D.C.

17-19—WV Chapter, Am. Academy of Family Physicians 3rd Annual Family Practice Weekend & Sports Medicine Conference, Huntington.

December

3-6—AMA Interim Meeting, Honolulu.

1990

January

11-13—Southern Section, Am. Laryngological, Rhinological & Otological Society, Inc., White Sulphur Springs.

26-28—WVSMA 23rd Mid-Winter Clinical Conference, Charleston.

28-31—Southeastern Surgical Conference, Naples, Fla.

February

8-13—Am. Academy of Orthopaedic Surgeons, New Orleans.

14-18—Am. College of Psychiatrists, Palm Springs, Calif.

24—Am. College of Utilization Review Physicians, Atlanta.

March

18-22—Am. College of Cardiology, New Orleans.

April

26-29—Am. College of Physicians, Chicago.

29-May 4—Am. Society of Colon & Rectal Surgeons, St. Louis, MO.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Statewide Planning Could Help Care

Solutions to the health care crisis in West Virginia might be more effective if a statewide network existed to formulate health care policy.

Dr. Steve Linder of the Institute for Health Policy Research and Education at the University of Texas visited WVU Health Sciences Center to discuss how a partnership between education and government might be formed to help solve the state's health care problems.

According to Dean Robert D'Alessandri, M.D., of the School of Medicine, there is definitely a need for this kind of leadership in the state.

"We realize that, as a state school of medicine, our role is not just to teach students or to provide information about health to the public. We also have a responsibility to help coordinate and utilize the resources of the Health Sciences Center more effectively," he said.

Share Problems

"With this in mind, we asked Doctor Linder to come so that we might find out what they are doing at the University of Texas to fulfill this role. Because Texas also has a large rural population, we share many of the same problems."

Doctor D'Alessandri said some of the most critical problems West Virginia is facing right now include physician retention, a shortage of physicians in rural areas, a lack of primary care physicians, reimbursement for care, unreimbursed or charity care, and controlling costs while at the same time keeping up with rapid developments in technology.

"We can look at these problems in a microscopic way; that is, we can encourage our students to go into primary care, encourage them to stay in West Virginia, or teach them about cutting cost, but this doesn't control the problems because there are economic factors involved," he said. "And we can't deal with economic factors on a microscopic level."

Doctor Linder met with WVU administrators, faculty and staff working in health sciences, social sciences, health services research, public administration and other areas.

They discussed the needs of the state, what a cohesive health policy could do for West Virginia, approaches that other states have used in policy-making, and some of the mechanisms that already exist in educational and governmental structures.

Planning Helps Systems

"States that have well-developed systems of health care usually also have well-developed structures for health care planning," Doctor Linder said. "There are similar problems in all 50 states, but they approach their problems in different ways."

He said some states have centers for health policy research and development such as the one at the University of Texas. Others have a statewide network made up of health care specialists, social scientists and a core analytic staff to work on problem-solving.

Both assess knowledge and ideas and disseminate information to legislators and others who are responsible for making key decisions for the state.

"Sometimes we think we need better legislation when what we really need is to provide them with better raw material to assist them in their deliberations.

"This may involve synthesizing or restructuring what we already know, or learning new ways of looking at problems," he said.

"For example, we may look at uncompensated care and focus on the providers of that care who are not being paid. We would be emphasizing hospital finance. Or we could focus on the indigent people who need care. Then we would be focusing on poverty-related concerns . . ."

Cancer Center Fills Development Post

Denver E. Allen, Jr., has been named Director of Development for the Mary Babb Randolph Cancer Center at WVU.

Allen will be responsible for fund raising activities for the Randolph Cancer Center, including the annual giving campaign, the spring Greenbrier Gala, the bequests program, and liaison with the Lettermen's Club, an organization of former WVU athletes that has made a long-term commitment to support the Cancer Center.

"Private giving will be crucial to the ultimate success of the Cancer Center and to the contribution it can make to the health of West Virginians," said Cancer Center Director Fred Butcher.

"Denver Allen brings valuable experience and skills to his new position, along with great enthusiasm for the challenges ahead. He will be shouldering a large responsibility, but he is in a position to accomplish a great deal of good for many people."

Allen, 31, is a Morgantown native. He earned bachelor's and master's degrees at WVU.

Prior to accepting the position with the Cancer Center, he was senior development officer/athletics at the University of Pittsburgh.

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Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

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Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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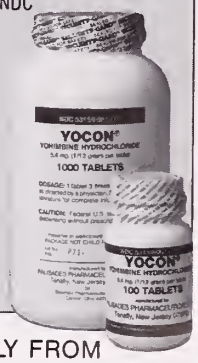

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MU School Of Medicine News

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Study Eyes Hormone Role in Obesity

A three-year, $165,000 research award to John W. Leidy, Jr., M.D., Ph.D., to study whether deficiencies in a growth-related hormone contribute to obesity has been provided by the U.S. Department of Veterans Affairs.

Doctor Leidy, a physician/researcher at MU School of Medicine and the Huntington VA Medical Center, said scientists already know that two hormone problems play roles in obesity: too much insulin and too little growth hormone. Doctor Leidy's study will attempt to find whether low levels of growth hormone-releasing hormone may also contribute to weight problems.

"By understanding why growth hormone is decreased, we may be able to develop strategies for changing growth hormone production in obesity," he said.

The idea is not a new one, he said, noting that "growth hormone boosters" have been promoted as a rapid-weight-loss gimmick.

"The therapies advertised in newspapers to 'melt away' fat or 'turn on the master gland' have never been proven by scientific evidence," he said.

"Growth hormone by itself probably has only a small effect on weight," he explained. "Early clinical studies showed that although growth hormone promotes muscle retention during fasting, it has little effect on weight loss."

Knowledge Can Help

Nevertheless, learning more about the deficiency of growth hormone in obesity might help doctors take better advantage of the relationship between insulin and growth hormone, Doctor Leidy said. In addition, there are cases in which even a small "edge" can make a difference for dieters.

"The biggest battle in weight loss is not necessarily losing the weight but keeping it off," he said "Most studies show that for people who lose a significant amount of weight over three to six months, many individuals gain the weight back over a period of two to five years. This is where something like growth hormone or another hormone might make a difference."

The problem is a timely one, since national figures show that about 20 per cent of American adults are obese. Both West Virginia and Kentucky exceed the national average, Doctor Leidy added. A Centers for Disease Control study indicated that 24 per cent of West Virginians and 22 per cent of Kentuckians are overweight.

"Although a low growth hormone level is probably only one of many factors involved in obesity, treatments that correct that problem—in combination with other therapies—might help make a difference," he said.

Brown, Rankin Named to New Posts

Dr. Patrick I. Brown has been named Associate Dean of Academic and Student Affairs, and Dr. Gary O. Rankin has been named Associate Dean for Biomedical Graduate Education and Research Development.

The appointments were announced by Charles H. McKown, Jr., M.D., Marshall Vice President and medical school Dean.

"Both Doctor Brown and Doctor Rankin have been valuable members of our faculty for several years, occupying leadership positions in their respective fields and within the School of Medicine," Dean McKown said.

Doctor Brown, who joined the Marshall faculty in 1975, became Associate Dean for Student Affairs in 1983, and has served as Chairman of the Department of Anatomy since 1986. He will continue as Interim Chairman of that department until a successor is found.

He received his bachelor's degree from Murray State University, a master's degree from the University of Kentucky, and his Ph.D. degree from Southern Illinois University-Carbondale.

Doctor Rankin, Chairman of the Department of Pharmacology since 1985, joined the school's faculty in 1978. He received his undergraduate degree from the University of Arkansas at Little Rock and his Ph.D. from the University of Mississippi.

Both Doctor Brown and Doctor Rankin have received numerous awards from Marshall's medical students. They also are both members of the honorary society, Phi Kappa Phi.

Brazilian Doctor At MU in October

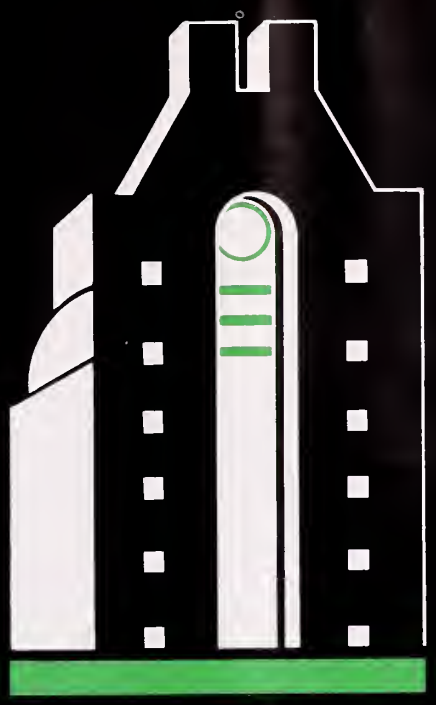
As part of an eight-week fellowship, Brazilian physician Reynaldo Dietze visited MU School of Medicine during October.

Doctor Dietze was one of 10 physicians participating in a Pfizer/USAID fellowship in infectious diseases through the Partners of the Americas program, according to Roberta Walters, the program's state Secretary and Huntington Coordinator.

MU President Dale Nitzschke met Doctor Dietze while visiting Espirito Santo, West Virginia's Brazilian sister state, in May.

Doctor Dietze is a man of exceptional talent and a dedication to helping the less fortunate like none I've ever seen before," he said. "He's simply a remarkable human being. We're delighted to have him at Marshall."

During his visit, Doctor Dietze worked with MU's new Chief of Infectious Diseases, Dr. Lynn Kitchen, as well as visiting a Marshall-affiliated rural clinic and taking part in the Medical School's international health program. He was to spend five weeks in West Virginia, including visits to Charleston Area Medical Center and West Virginia University.



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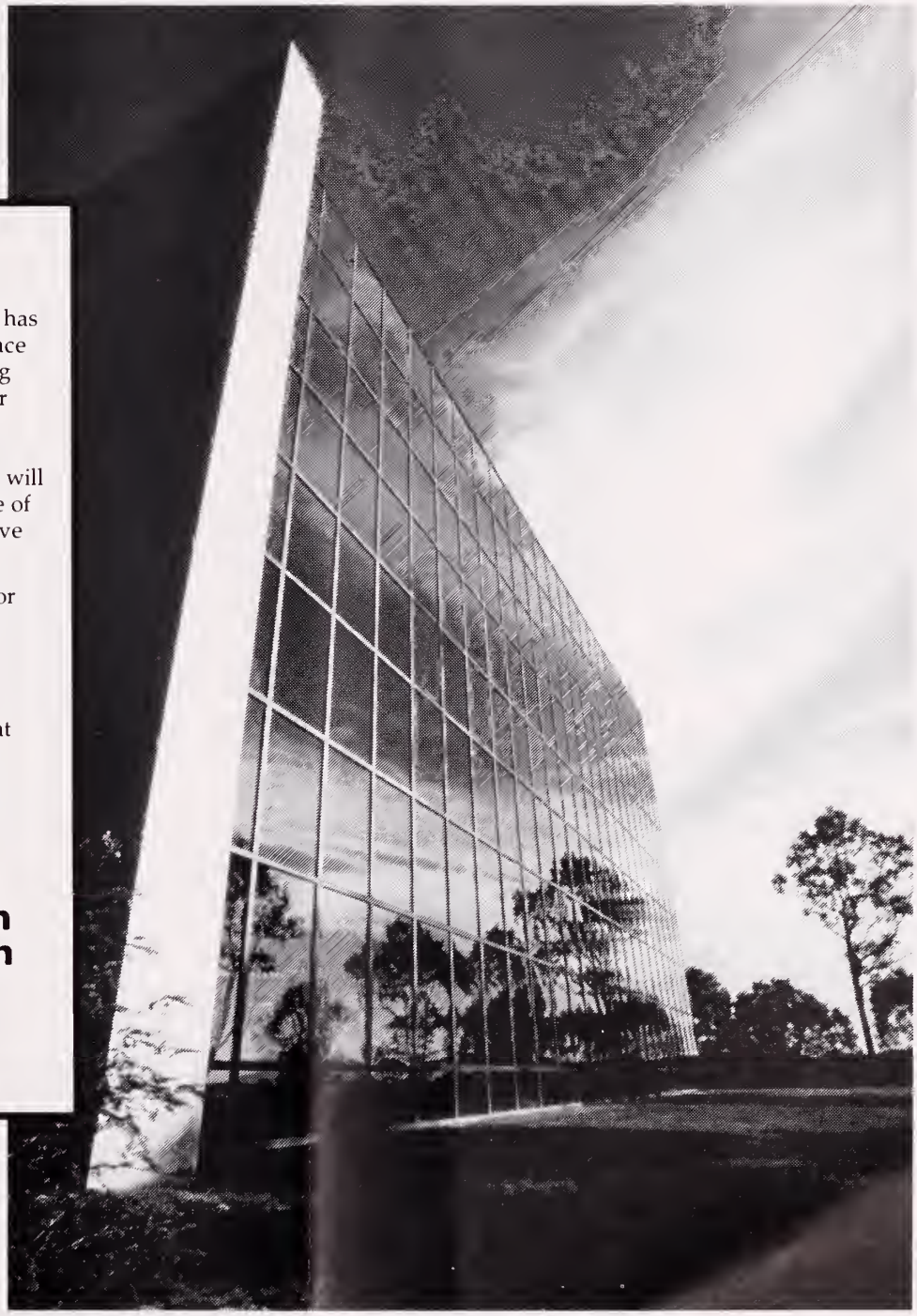

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New Members

The following physicians were welcomed in September as new members of the West Virginia State Medical Association:

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Elizabeth A. Barranco-Smego, M.D.
Department of Medicine
WVU Medical Center
Morgantown, WV 26506

Stephen Bloomfield, M.D.
Department of Neurosurgery
WVU Medical Center
Morgantown, WV 26506

Elizabeth O. Chung, M.D.
Department of Neurology
WVU Medical Center
Morgantown, WV 26506

Anne C. Cutlip, M.D.
Department of Family Practice
WVU Medical Center
Morgantown, WV 26506

David M. Elnicki, M.D.
Department of Medicine
WVU Medical Center
Morgantown, WV 26506

Alan K. Gilman, M.D.
Department of Anesthesiology
WVU Medical Center
Morgantown, WV 26506

Janet E. Graeber, M.D.
Department of Pediatrics
WVU Medical Center
Morgantown, WV 26506

Marian S. Macsai-Kaplan, M.D.
Department of Ophthalmology
WVU Medical Center
Morgantown, WV 26506

Bobby A. Miller II, M.D.
Department of Behavioral Medicine
WVU Medical Center
Morgantown, WV 26506

Raymond A. Smego, M.D.
Department of Medicine
WVU Medical Center
Morgantown, WV 26506

Herbert E. Ward, Jr., M.D.
Department of Behavioral Medicine
WVU Medical Center
Morgantown, WV 26506

Summers

Beatriz L. Catral, M.D.
Summers County Hospital
P. O. Box 940
Hinton, WV 25951

WESPAC Members

Listed below are additional 1989 WESPAC members reported to the *Journal* since those published in the October issue. New WESPAC members will be reported next month.

Cabell

Homer Lee Christian
*William L. Neal

Kanawha

Harry D. Fortner

Ohio

*Daniel W. Wilson

Parkersburg

Michael A. Morehead

*Sustainer Member

County Societies

PARKERSBURG ACADEMY

The Academy of Medicine of Parkersburg met September 13 at Parkersburg Country Club.

Ellen Wald, M.D., of Pittsburgh spoke on "Deep Infections of the Neck."

The Academy approved a contribution of $100 to the League of Women Voters.—Frank Schwartz, M.D., Secretary.

WESTERN

James E. Brick, M.D., was guest speaker for the meeting of the Western Medical Society September 12 in Spencer at Roane General Hospital.

Rheumatoid arthritis and related diseases was the subject of his talk, which was followed by questions and answers.

Doctor Brick is Assistant Professor of Medicine at WVU.

The Society approved writing a letter to the Immigration Office in an effort to expedite a visa for a foreign physician who would like to come to Roane County to set up his practice of internal medicine.—A. H. Morad, M.D., Secretary.

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The names and addresses of the publisher, editor and managing editor are: Publisher, the West Virginia State Medical Association, Box 4106, Charleston, WV 25364; Editor, Stephen D. Ward, M.D., The Wheeling Clinic, Wheeling WV 26003; and Managing Editor, Mr. Custer B. Holliday, Box 4106, Charleston, WV 25364.

The known bond holders, mortgages, and other security holders owning or holding one per cent or more of the total amount of bonds, mortgages, or other securities are: None.

The average number of copies each issue during preceding twelve months are: (A) Total number of copies printed 3,260; (B 1) Paid circulation through dealers and carriers, street vendors and counter sales: None; (B 2) Paid circulation through mail subscriptions: 2,484; (C) Total paid circulation 2,484; (D) Free distribution by mail, carrier, or other means: 651; (E) Total distributions, 3,135; (F 1) Office use, left-over unaccounted, spoiled after printing: 125; (F 2) Copies distributed to news agents, but not sold: None; and (G) Total 3,260.

I certify that the statements made by me above are correct and complete.

(Signed) Custer B. Holliday,
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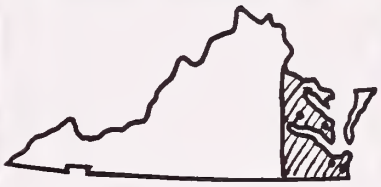

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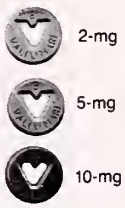

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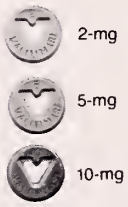

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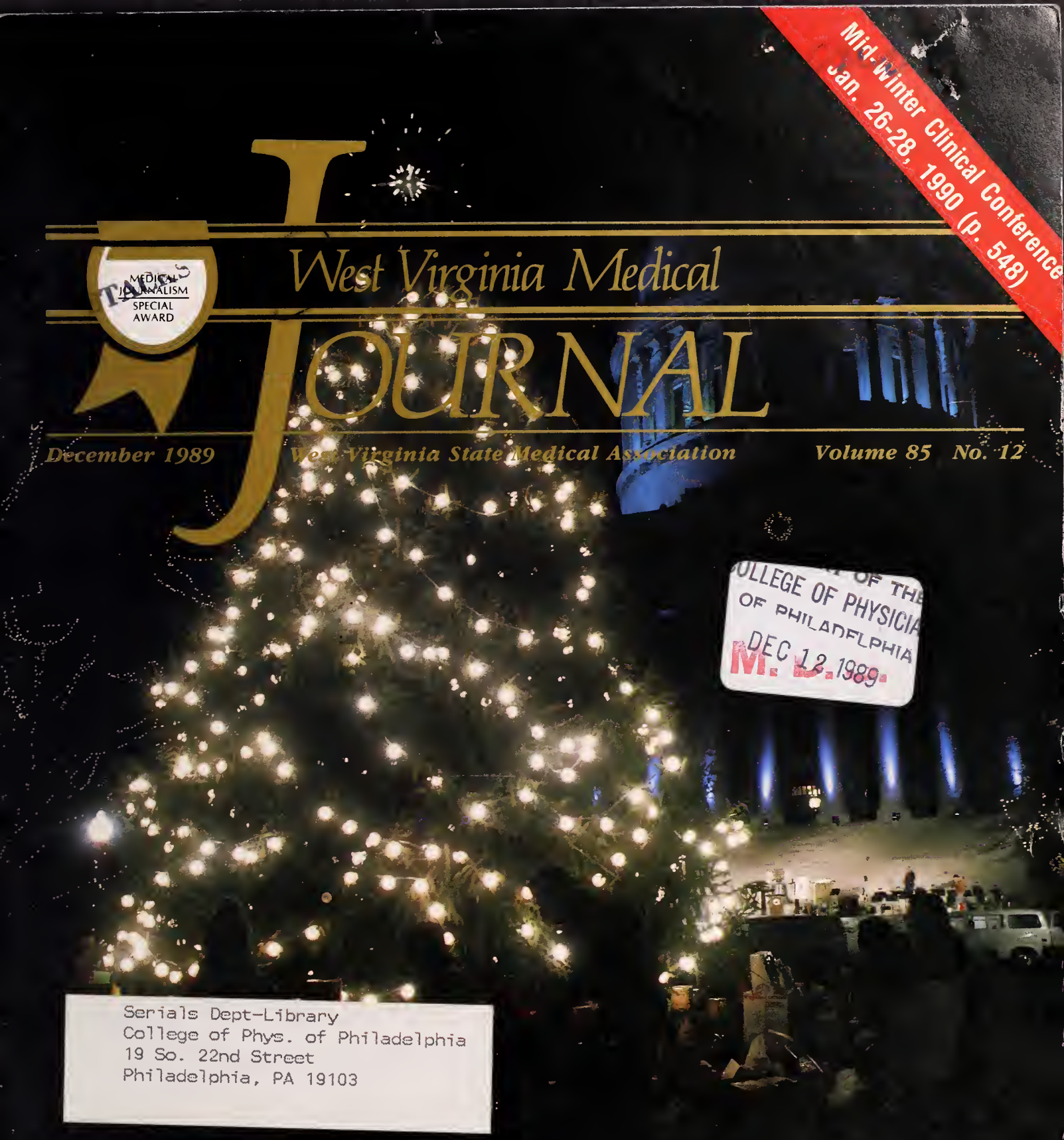
West Virginia Medical JOURNAL

December 1989 West Virginia State Medical Association Volume 85 No. 12



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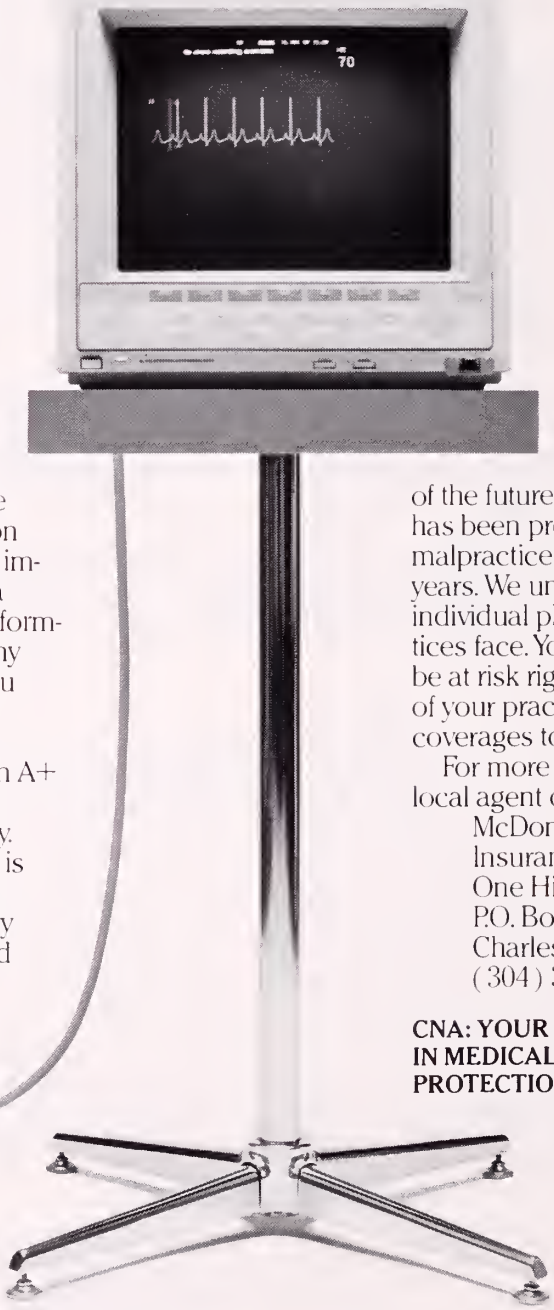

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Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Postmaster send form 3579 to The West Virginia Medical Journal, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

THE WEST VIRGINIA
MEDICAL JOURNAL

(ISSN 0043-3284) is published monthly by the West Virginia State Medical Association, 4307 MacCorkle Avenue, S. E., Charleston, WV 25304.

Subscription Rates $15 a year in the U. S. A.; $60 in foreign countries; $2 per single copy. Address all communications to The West Virginia Medical Journal, P. O. Box 4106, Charleston, WV 25364

Microfilm editions beginning with the 1972 volume are available from University Microfilms International, 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

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MEMBER, WEST VIRGINIA PRESS ASSOCIATION, 1989

USPS 676 740
ISSN 0043 - 3284

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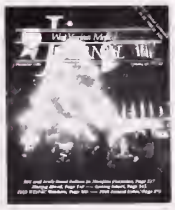

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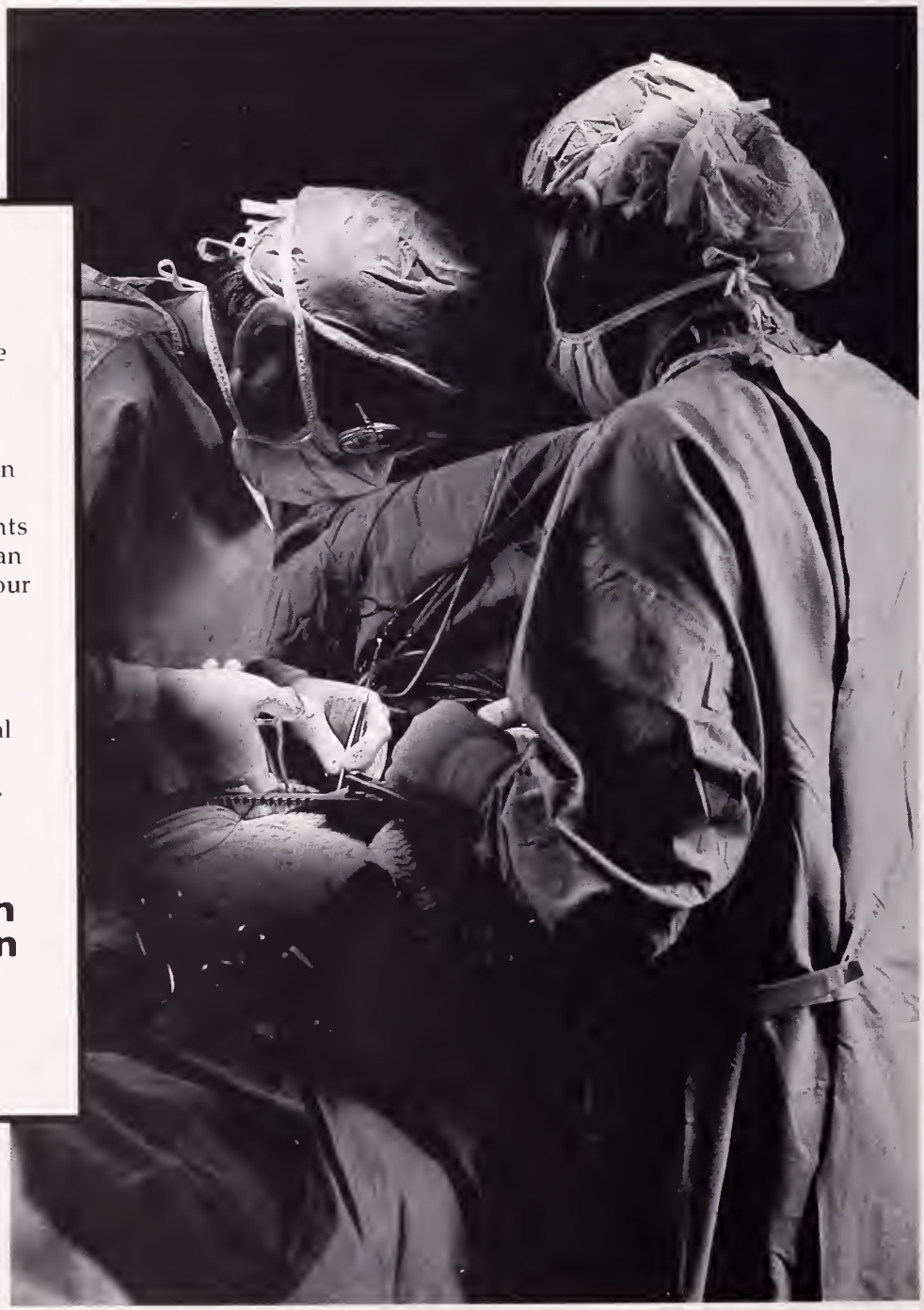
Christmas at the West Virginia Capitol Building in Charleston. Photo courtesy of West Virginia Department of Commerce. David E. Fattaleh, photographer.

Sometimes Being Sure Of Yourself Just Isn't Enough.



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Case Report

DIC and Acute Renal Failure as a Complication of Abruptio Placentae

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Attending Physician, Department of Obstetrics and Gynecology, United Hospital Center, Clarksburg, West Virginia

Disseminated intravascular coagulopathy (DIC) is not a new concept. Almost 90 years ago De Lee (1) reported a case of fetal coagulation disorder with abruptio placentae and described it as "temporary hemophilia." Disseminated intravascular clotting is the result of a widespread exposure of the circulating blood to procoagulant activity capable of activating fibrinolytic enzyme system converting fibrinogen into the fibrin. Fibrin may in turn cause small blood vessel occlusion resulting in tissue necrosis, and as the phenomenon occurs more often in the glomerular capillaries, acute renal failure may ensue.

Introduction

Disseminated intravascular clotting (DIC), as an obstetrical complication, is more often seen with placental abruption, prolonged retention of dead fetus, amniotic fluid embolism, induced abortions, eclampsia, and severe preeclampsia (2). The incidence of DIC is directly related to the energy with which the diagnosis is pursued; in some studies (3, 4) it appears as a rela-tively rare entity, yet in another study (5) its occurrence has been reported one in each 1,000 hospital admissions. World wide, venomous snakebites are probably one of the most common causes of diffuse intravascular coagulation (6). Jacobson and Jackson (3), however, incriminate obstetrical disorders as the etiologic factor in over half of the DIC cases.

Various diagnostic tests have been utilized, and great emphasis has been placed on depletion or consumption of clotting factors in both the pathogenesis and the diagnosis of the syndrome. Accordingly, DIC has been defined as the presence of thrombocytopenia, low fibrinogen levels (plasma fibrinogen less than 300 mg/dl), and fibrin split products of greater than 40 mg/L (7). As DIC is always the result of a serious underlying disorder, its cure depends on prompt recognition and treatment of the primary disorder.

The present report details a case of DIC occurring shortly following abruptio placenta, severe enough to cause fetal death and Couvelaire uterus. The patient developed acute renal failure, yet recovered completely. The pathophysiology of the syndrome is reviewed. The author would like to familiarize obstetricians with the condition and its management.

"As DIC is always the result of a serious underlying disorder, its cure depends on prompt recognition and treatment of the primary disorder."

Case Report

E. W., an otherwise healthy 19-year-old, white female, gravida 1, was admitted to the labor and delivery room service of United Hospital Center with the onset of labor two hours earlier. She had had an uncomplicated pregnancy with no history of illness, trauma, toxic exposure, or drug ingestion. She, however, smoked about half a pack of cigarettes a day. The initial prenatal examination was at 21 weeks' gestation when the uterine fundus was felt and measured 19 cm above the symphysis pubis; the fetal heart beats could be heard with an ultrasonic stethoscope at the rate of 136 beats per minute.

She was six feet, two inches tall, and weighed 238 lbs., and had blood pressure of 130/80 mm Hg. As her last menstrual date was uncertain, an ultrasound examination calculated her confinement date. Studies of her routine blood tests showed blood type A, Ph positive, non-reactive RPR, and positive (immune) rubella titer. Her two hours glucose tolerance tests at 24, 29, and 38 weeks of pregnancy were within normal limits. Routine prenatal urinalysis for protein was negative but on several occasions showed a trace of glucosuria.

Fetal Movement

She gained a total weight of 43 lbs. during the entire prenatal course, and her highest blood pressure was 135/85 mm Hg at 38 weeks of gestation. A non-stress test performed the day before admission demonstrated fetal heart rate acceleration in response to fetal movements (Figure), and she had experienced fetal movement up to the time of the onset of labor. Physical examination on admission revealed an anxious, teenage girl with blood pressure of 120/70 and pulse of 90.

Electronic fetal monitoring showed uterine contractions every two minutes, lasting approximately 50 seconds, but no fetal heart beats. The cervix was two to three cm dilated, 75 per cent effaced through which a vertex presentation at minus one station was noted. As no fetal heart tones were heard, amniotomy was done producing clear fluid. An electrode was placed on the fetal scalp obtaining a heart rate of 87 to 95 beats per minute, which

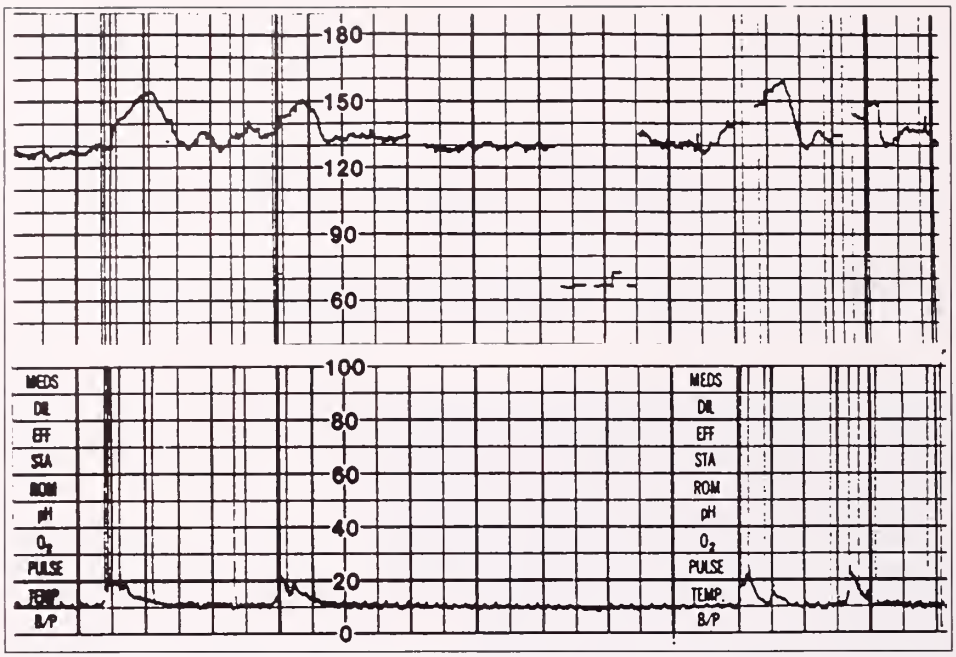

Figure. Segment of non-stress test showing fetal heart rate accelerations in response to fetal movements on day before admission.

was the same rate as the maternal heart beats. Because of the unavailability of real-time ultrasonography at that time, a second fetal monitor was placed over the maternal precardium to ascertain according to Barrett and Boehm (8) the fetal death by getting an exact correlation of the maternal and fetal heart rate tracings. An hour later when not much change in the process of labor was noticed, the patient became irritable, and adamantly requested a C-Section rather than going through long labor and delivery of a dead baby.

Stillborn Girl

Two hours after admission she delivered a grossly normal, 3,452-gram stillborn girl through low segment transverse uterine incision. The placenta was completely separated, only adherent to the uterine wall by its membranes, and huge retroplacental clots were found, some of which attached to the placental cotyledons. Widespread extravasation of blood into the myometrium and beneath the uterine serosa was noted producing a picture of uteroplacental apoplexy.

The intraoperative course was uneventful and the uterus remained well contracted after being emptied; however, immediately following the operation the patient developed profuse vaginal bleeding and became severly oliguric. During this period the blood pressure and pulse were reported by Doppler's ultrasound at 80/50 mm Hg and 100 to 140 beats per minute, respectively. As thrombocytopenia (platelet count of 87,000/mm^3) was noted coupled with plasma fibrinogen level of less than 100 mg/dl and fibrin split products of greater than 640 mg/l, DIC was diagnosed.

In the meantime the hemoglobin and hematocrit levels had steadily decreased from 9.3 to 6.5 g/dl and 27.8 to 19.7 per cent, respectively. She was receiving supportive therapy consisting of vigorous intravenous hydration, packed cell transfusions, and broad spectrum antibiotics. She appeared to have depleted her clotting factors; her activated partial thromboplastin time was greater than 200 seconds, and prothrombin time was less than 10 per cent. A hematology consultation was sought and replacement therapy begun using four units of fresh plasma and 1,000 cc of normal saline. By four hours postoperation she had received five units of platelets; as oliguric renal failure was impending, furosemide 20 mg was administered intravenously, and another 40 mg was given one hour later.

Gradual improvement was noted with urine output and, by seven hours postoperation, the urine output returned to normal range. Normal lochia replaced vaginal bleeding, the blood pressure stabilized at 110/60, and the pulse to 90. Improvement was also noted in CBC and blood components. Hemoglobin, hematocrit, platelets, fibrinogen level, fibrin split products, APTT, and prothrombin time, respectively, were 7.6 gm/dl, 23.1 per cent, 114000/mm^3, 150 mg/dl, 80 mg/L, 26 seconds, and 87 per cent. However, since BUN was 28 mg/dl and creatinine 2.5 mg/dl., a nephrology consultation was obtained.

On the third postoperative day, as the hemoglobin and hematocrit remained low, she received two units of washed packed cells. The following day complete blood counts and deficient clotting factors were rising to about the normal levels. The BUN and creatinine levels were, however, increasing; the BUN reached 32 mg/dl, and the serum creatinine 2.9 mg/dl. Spot urine for sodium and creatinine were 26 mmol/L and 71 mg/dl, respectively.

Renal Hypoperfusion

During this period she had orthostatic hypotension and tachycardia indicating prerenal state resulting in renal hypoperfusion. From the third postoperative day she was receiving a regular diet with iron vitamin supplementary tablets, and was ambulating with no help. All antibiotic therapy had been discontinued, and the management was now directed to ameliorate renal injury. Repeated spot urinalysis for sodium and creatinine signaled encouraging improvement in renal functions. Serum creatinine and BUN levels on the fifth and sixth postoperative day steadily decreased from 2.6 and 32 mg/dl to 2.2 and 29 mg/dl, respectively. Renal ultrasound was normal, and an electrocardiogram demonstrated no significant pathology. She remained afebrile during the entire course of her hospitalization.

On the sixth postoperative day all skin clips were removed since the surgical wound appeared clean and well healed. She was discharged from the hospital on postoperative

day seven in good physical and mental health; the BUN and serum creatinine were in normal range. A week later the BUN and creatinine as well as the CPK, SCOT, LDH, total bilirubin, and uric acid, which were very mildly elevated earlier, had all returned to normal limits. She continued to do well 11 months later.

Discussion

During the postoperative course the patient presented all the salient features of DIC as well as its major complication, acute renal failure. The diagnosis of DIC based on routine tests is difficult for, even in a normal pregnancy, a minor amount of defibrination occurs as a low-grade "physiologic" process (9). The semiquantitative DIC scoring system introduced by Hellgren, et al. (10) has, however, proved to be a practical and useful tool in diagnosing the syndrome and the degree of its severity (10, 11). The patient demonstrated all the criteria of Hellgren, et al. (10), and her parameters matched the group with manifest DIC of Van Dam and co-worker (12).

"The diagnosis of DIC based on routine tests is difficult for, even in a normal pregnancy, a minor amount of defibrination occurs as a low-grade 'physiologic' process."

In recent years data (7, 12, 13) associating DIC with the syndrome of hemolysis, elevated liver enzymes and low platelets (HELLP) in severe preeclampsia are accumulating. The syndrome was considered by Weinstein (14, 15) as a unique variant of severe preeclampsia, and by Goodlin, et al. (16) who labeled it impending gestosis or EPH gestosis as an early form of severe preeclampsia. Most authors (14, 15, 16, 17), however, do not consider to HELLP syndrome to be a form of DIC because coagulation parameters such as prothrombin time, activated thromboplastin time, partial thromboplastin time, and serum fibrinogen are within the normal range. Our patient revealed no potential prenatal events leading to the HELLP syndrome and demonstrated no criteria for diagnosing the syndrome on admission. Similar to the 38-per cent incidence of coagulation defects in cases of placental abruption severe enough to result in fetal death noted by the Prichard and Brekan study (18), it is believed that our patient in developing DIC was influenced by severe abruptio placentae and retroplacental clot. In severe cases of abruptio placentae such as our patient's where the size of retroplacental clot exceeds 500 ml (19), excessive and often rapid distension of the uterus occurs. This leaves the vascular channels open and furthers hemorrhage and expansion of the hematoma, which in turn damage the placenta by allowing entrance of thromboplastin and activators of the fibrinolytic system into the maternal circulation.

Local trauma introduced by intramyometrial and subserosal hemorrhage releases tissue activators, and may increase the likelihood of overt coagulopathy. Expeditious delivery is usually recommended. DIC in abruptio placentae is directly proportional to the degree of placental detachment, and its progression appears to depend on the evacuation of the retroplacental clots which halts the consumptive coagulopathy (20, 21, 22).

Tissue hypoxia and ischemic necrosis seen in patients with fulminant DIC are the results of vessel wall damage and increased vascular permeability, perfusion changes, and arterial and venous microthrombosis. Yet, DIC, even if it is so severe that it takes the form of a true defibrination syndrome, does not appear to be associated with an unfavorable renal prognosis (23). Anemia and shock appear to be of greater importance, especially in the case of abruptio placentae, as these conditions are superimposed on the renal vasoconstriction (24). Attention therefore should be directed toward removing the thromboplastic material from the uterus and promptly correcting the anemia and hypovolumia. Consumed clotting factor and antithrombin III should be replaced. Fresh frozen plasma or cryoprecipitate contains adequate antithrombin III. Each unit of cryoprecipitate contains approximately 250 mg of fibrinogen, and it is the therapy of choice when the fibrinogen level is decreased. When operative delivery is undertaken, and when significant decreased platelet concentration is encountered, platelet replacement should be considered.

Acknowledgement

The author thanks Drs. James Knost, hematologist; Joseph Liput, nephrologist; Mounir Shazly, anesthesiologist, and Tina Romeo, ART, Director, Medical Records, for their invaluable collaberation.

"In recent years data associating DIC with the syndrome of hemolysis, elevated liver enzymes and low platelets (HELLP) in severe preeclampsia are accumulating."

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Laser Tumor Debulking

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When adequate tumor ablation is nonfeasible, debulking has become essential to palliate or to prepare patients for chemotherapy, radiotherapy or definite surgery. The CO_2 and Nd:YAG lasers were used to debulk 120 head and neck cases, of which 118 were successfully debulked. The advantages of the laser as a debulker are its facility, rapidity, repeatability, coagulability, atraumaticity, precision, sterilization, and prompt healing; thus, tracheostomy and extended hospitalization were obviated. This paper describes the effectiveness and benefits of the CO_2 and Nd:YAG lasers as tumor debulkers.

Introduction of CO_2 laser by Strong and Jako (1) for laryngeal papilloma removal in1972 ushered in a new dimension in surgery for its precision, atraumatization and acicatrization. Development of the contact Nd:YAG laser in 1985 by Daikuzono (2) added versatility, facility and coagulability. Debulking is a method of tumor reduction in size and volume for palliation of airway (3,4,5), swallowing (6), bleeding, and pain; also as preparation for radiotherapy, chemotherapy or definitive surgery. Patients with advanced lesions of the head and neck region require immediate management of their airway or swallowing disorder. Lasers (CO_2 and Nd:YAG) offer effective and precise tumor debulking prior to their definitive treatment.

Materials and Methods

Between 1977 and 1989, a total of 120 patients with various head and neck tumors underwent debulking using the carbon dioxide and the Nd:YAG lasers. There were 80 men and 40 women whose ages ranged from two days to 90 years. The anatomical sites involved are listed in Table 1; the histological diagnosis, Table 2.

A Coherent 451 CO_2 laser machine that was coaxed with a Zeiss operating microscope (300-400 mm lens) at a spot size of 0.5 mm-2 mm was used for debulking since 1977. For bronchoscopic debulking of tracheobronchial tumors, a rigid bronchoscope with a carbon dioxide laser coupler was used. The power setting was commonly at 15 to 20 watts at continuous mode. For the past year, a SLT (Surgical Laser Technologies) 60 w Nd:YAG machine with its fibers, handles and probes was also used for tumor debulking. Its power setting was at 18 watts in continuous wave in the contact mode with combined use of frosted scalpel (0.8 mm) and vaporizing round probe. In the non-contact mode the Nd:YAG beam was delivered at 35-45 watts continuous wave.

For tracheobronchial and esophageal tumor debulking, the Nd:YAG fibers were passed through endoscopes in both non-contact and contact mode. All of these patients were done under general endotracheal (aluminum-wrapped endotracheal silicone tubes) anesthesia, except for those tracheobronchial cases which received intravenous analgesia, topical anesthesia and lidocaine HCL one per cent for superior laryngeal nerve block. Precaution and safety measures for CO_2 (7) and contact Nd:YAG (8) laser use were observed during the procedures.

For control of bleeding of blood vessels more than 0.5 mm (CO_2 laser) or 2.0 mm (Contact Nd:YAG laser) in diameter, the following methods were used: laser defocusing (CO_2 laser) or siding (contact Nd:YAG), electrocautery, ligation and hypotension anesthesia (9) at 55 to 60 torr systolic to

TABLE 1
Anatomical Sites

Oral cavity	67
Larynx	30
Tracheobronchi	20
Esophagus	3

TABLE 2
Histological Diagnosis

Squamous cell carcinoma	88
Malignant lymphoma	7
Adenoid cystic carcinoma	8
Malignant melanoma	1
Papillomatosis	10
Hemangioma	2
Pleomorphic adenoma	2
Neuroepithelial tumor	1
Metastatic postcricoid adenocarcinoma	1

Figure 1. Verrucous squamous-cell carcinoma of the nasal cavities, upper alveolus, gingiva and hard palate.

minimize the general oozing during the debulking.

Illustrated Case

A 52-year-old white woman was examined for two years' extensive growth of the upper alveolus, gingiva, hard palate and nasal cavities. Examination showed enormous papillary, tan-grayish lesions fully filling the nasal cavities, the upper alveolus, gingiva and hard palate (Figure 1). Foul, purulent discharge exuded from the tumor. CT scanning disclosed opacity of the nasal cavities and paranasal sinuses, and proliferative tumor involvement of the upper alveolus and hard palate (Figure 4).

Extensive laser tumor debulking of the oral, nasal and paranasal (lateral rhinotomy) cavities was done with the histological diagnosis of verrucous squamous cell carcinoma (Figure 3). The patient was discharged the following day after surgery without bleeding, airway and swallowing problems. Systemic antibiotics and oral hygiene were continued post-laser debulking. Cobalt treatment of 7,200 rads was rendered immediately for eight weeks to the tumor sites resulting in complete regression as evident on fiberoptic examination (Figure 2)

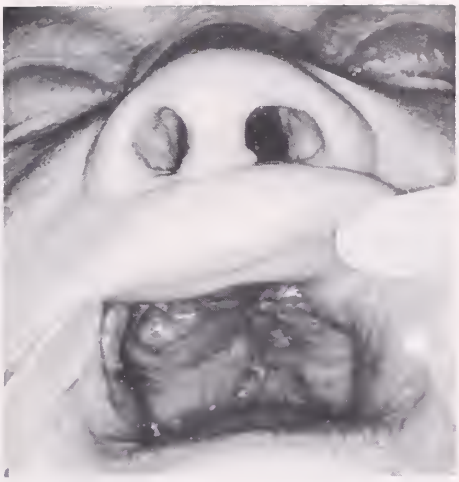

Figure 2. Complete tumor regression after laser debulking and cobalt radiation.

and CT scanning (Figure 5). The patient has been free of tumor for one-year followup.

Discussion

Due to minimal tissue edema and absence of postoperative hemorrhage, the majority of these patients were discharged the following day after debulking and arrangement made for their definitive management. In all, 118 of these patients were successfully debulked; two patients with a highly vascular tumor of the trachea and an inaccessible oropharyngeal tumor due to trismus could not be debulked.

One patient who had received cobalt radiation to the larynx required a tracheostomy due to severe laryngeal edema after a laser debulking for a second hypopharyngeal tumor. Intubation was attempted repeatedly prior to the debulking. He subsequently was decannulated 72 hours later.

Another patient was hospitalized for seven days after a laser debulking of an obstructive oropharyngeal squamous-cell carcinoma to correct severe dehydration and electrolyte imbalance, and to provide a feeding gastrostomy tube. He eventually received cobalt radiation without a tracheostomy.

The advantages of lasers as debulkers are their facility, hemostasis, atraumaticity, predictability, sterilization (10) and repeatability. Because of these advantages, laser debulking obviates performing tracheostomy, shortens hospitalization, and provides improved quality of life. Postoperative swelling, pain, bleeding, and infection are also lessened.

The main indications for laser tumor debulking are for palliation of airway, swallowing, pain, and bleeding, and also preparation for radiotherapy, chemotherapy or definitive surgery. Since laser is a nonionizing radiation, laser debulking was used repeatedly for tracheobronchial tumors (11), extensive laryngeal papillomatosis and esophageal cancer. The CO_2 and Nd:YAG lasers are invaluable tools for the head and neck surgeon, for

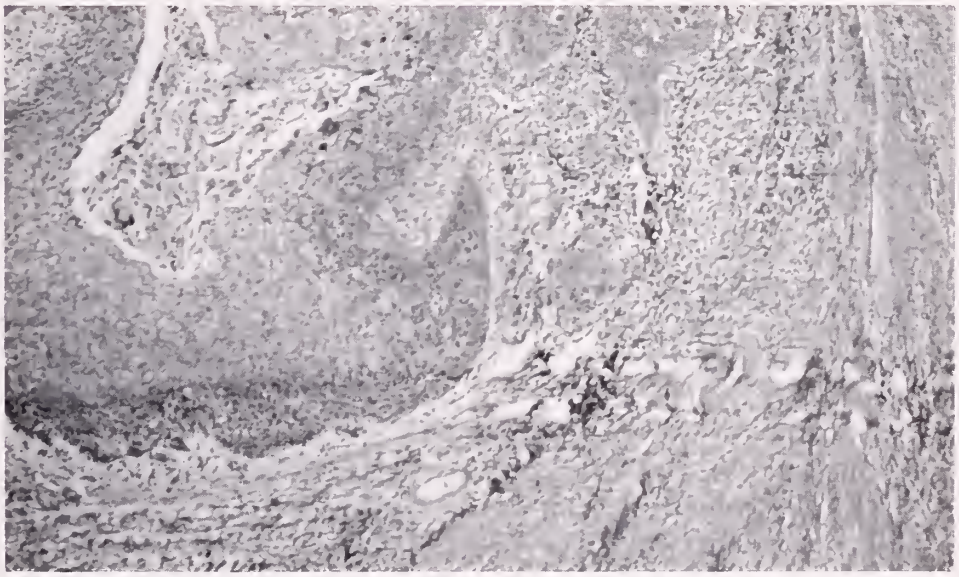

Figure 3. Photomicrograph of verrucous squamous-cell carcinoma (Hematoxylin and eosin, x100).

they are effective, versatile, and beneficial in tumor debulking.

Acknowledgements

The author wishes to thank Mary Jane Willis, PA, for manuscript preparation, and Julie LeJeune for poster preparation. The author also gratefully acknowledges A. Don Wolfe, M.D., and staff for their radiotherapy assistance; and Bobby L. Caldwell, M.D., and staff for histological diagnosis.

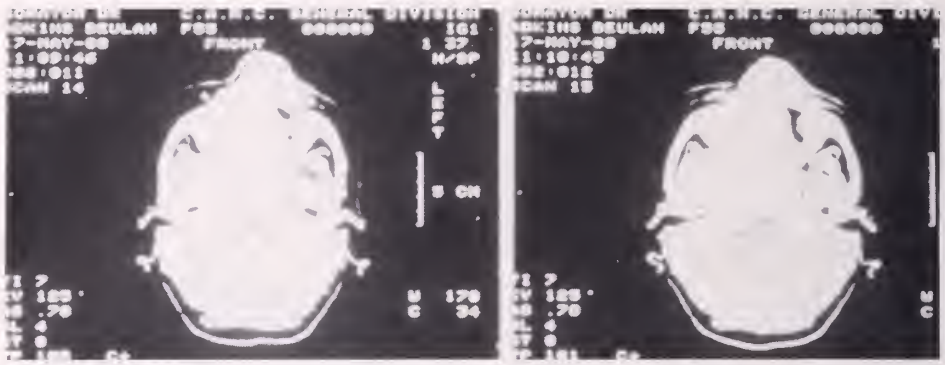

Figure 4. CT scan showing tumor involvement of paranasal sinuses.

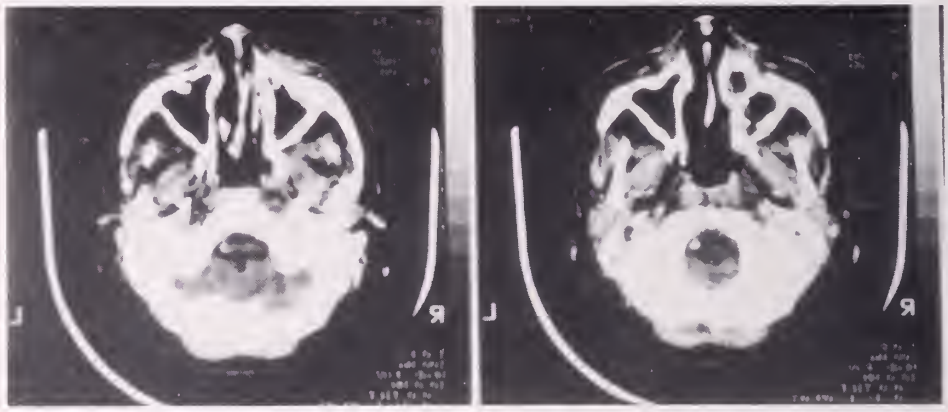

Figure 5. CT scan disclosing tumor clearance of nasal, paranasal and oral cavities.

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Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Cholesterol Emboli Syndrome

Discussant:

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The cholesterol emboli syndrome is a disorder caused by showers of microemboli which impact the small arteries. It can occur spontaneously or be precipitated by vascular surgery, arteriography or anticoagulation. The typical patient is a man older than 60 years with risk factors for atherosclerotic disease. The organs most often affected are the kidneys, skin, muscles and abdominal viscera. Common clinical presentations include renal failure and livedo reticularis or gangrene of the toes with intact pulses. Eosinophilia and hypocomplementemia may occur. The syndrome can be fatal or result in end-stage renal disease, but partial recovery can also occur.

Case Presentation

The patient was a 70-year-old male with history of hypertension, type II diabetes mellitus and cigarette smoking with complaint of a vague bilateral visual disturbance. Neurologic examination was normal, and carotid bruits were absent. Because a magnetic resonance imaging scan of the head indicated small left occipital infarcts, a cerebral angiogram was done. Angiography was performed through the left femoral artery, and catheter passage

was difficult. A 50-per cent stenosis of the left vertebral artery was found. The patient became transiently confused after the procedure and his visual difficulties worsened. The creatinine was 1.2 mg/dl prior to angiography, rising to 2.1 mg/dl three days later at discharge.

The patient was readmitted five days post-discharge for headache. On physical examination, Mollenhorst plaques were seen. Livedo reticularis was noted over both legs, and the toes were ecchymotic. The BUN was 116 mg/dl; the creatinine 6.8 mg/dl. The white blood count was 10,000 with seven per cent eosinophils.

Despite initiation of hemodialysis, the patient became progressively confused and debilitated. He died two months after the carotid angiogram.

Introduction

The case presentation is a good example of the syndrome of cholesterol embolization in its most devastating form. Not all cases end so badly, however.

This is a syndrome which is known by several names including cholesterol embolization, cholesterol crystal embolization, atheroembolic disease, and microembolic disease. Even though the medical community is becoming increasingly aware of this problem, there are large gaps in our knowledge. To date, there has been no prospective study of the disease or its treatment.

This review will outline the clinical aspects of this disease as well as the laboratory findings. Entities which may present difficulties in differential diagnosis will be discussed in addition to areas where important questions remain.

Clinical Findings

The syndrome of cholesterol embolization occurs when microscopically-sized, cholesterol-containing particles embolize from atheromatous plaques and impact in small arteries. The arteries usually involved are on the order of 150 to 200 microns in diameter. Although almost every organ has been reported to be involved, the most common victims are the skin and muscle of the legs, the kidneys and abdominal viscera. This predilection occurs because the most common sources of the embolic material are the abdominal aorta and descending thoracic aorta.

The patient at risk for atheroembolic disease is the patient at risk for atherosclerosis. The typical patient is a male over 60 years of age. A history of smoking, hypertension or diabetes is very common. These patients also usually have history of coronary artery disease, carotid vascular disease or peripheral vascular disease.

Cholesterol embolization can occur spontaneously but often complicates arteriography, vascular surgery or anticoagulant therapy.

Arteriography is thought to induce cholesterol embolization when the arteriographic catheter disrupts atherosclerotic plaques thereby exposing the plaque contents to the general circulation. Microembolic disease can occur after technically easy procedures as well as difficult ones. Colt, et al. (1) reported eight cases of cholesterol embolization which followed cardiac catheterization. In no case was a specific difficulty or prolongation of the procedure noted. All of the catheterizations were done via the femoral approach. Although three of these eight patients died, five were able to survive without dialysis.

"The typical patient is a man older than 60 years with risk factors for atherosclerotic disease."

In contrast, Gaines, et al. (2) reported five cases which occurred after technically difficult procedures. In each case, the manifestations of embolization occurred quickly, with the patient often complaining of leg pain during the procedure or within hours of the procedure. Four of these five patients died. It is likely that a difficult procedure—one which, for example, requires multiple attempts of catheter passage—increases the chances of plaque disruption or of increasing the volume of embolized material. Leg pain or leg blanching occurring at the time of catheter manipulation may be an early warning sign of microembolization and a sign that the procedure should be terminated.

In Drost's (3) series, seven cases were found to complicate cardiac catheterization via the femoral approach out of 4,587 patients. Even though this makes the incidence seem quite low, it would be useful to know the risk in those patients most likely to suffer the disease. It would also be useful to know if any physical sign such as an abdominal or femoral bruit can help predict risk.

A second risk factor for cholesterol embolization is anticoagulation. For many years, the purple or blue toe syndrome has been attributed to warfarin. The pathogenesis was initially thought to be drug-induced vasculitis, but more recently is thought due to cholesterol embolization. It is postulated that clot forms over eroded plaques in diseased vessels, and that anticoagulation interferes with clot formation, making the contents of the plaques more prone to embolize. The purple toes have been reported to occur from between three to 12 weeks after initiation of anticoagulant therapy. In addition to warfarin, streptokinase has been reported to cause this syndrome. When the atheroembolic process is recognized, the anticoagulant should be stopped to allow for clinical improvement.

Skin

The skin of the lower abdomen or legs is often affected by microembolization. The skin changes may be the only manifestation (1), can occur as part of a multisystemic syndrome, or may be completely absent. The percentage of cases with skin changes is unknown but is likely quite high. When present, the skin changes provide a valuable clue to diagnosis. The skin changes can take a number of forms: livedo reticularis, immediate blanching after catheterization, cyanosis, ulcerations, nodular lesions, or petechiae.

Livedo reticularis is one of the more common skin manifestations, and takes the form of blue-red discoloration which occurs in a net-like pattern. The livedo can be seen from the toes to the abdomen or

lower back. The exact cause of the livedo is unclear but probably is due to partial occlusion of small arteries deep in the dermis. A biopsy of the affected area may clinch the diagnosis if cholesterol clefts are found, but biopsies should be taken as deeply as possible. A negative biopsy does not necessarily rule out cholesterol embolization. The differential diagnosis of livedo reticularis includes vasculitis and low perfusion states. Subcutaneous nodules may also be found, likely caused by an inflammatory reaction surrounding cholesterol-impacted vessels. The differential diagnosis in these cases may include polyarteritis nodosa.

Cyanosis of the toes is a common finding with cholesterol embolization. This appearance in conjunction with preserved pedal pulses should suggest microembolization. When severe enough, ulcerations or gangrene may develop, requiring amputation. The cyanotic digits are often quite painful.

Kidney

The kidneys (I) are frequently, although not invariably, affected by cholesterol emboli. The emboli occur without flank pain. The incidence of clinically significant renal emboli occurring after angiographic procedures or aortic surgery is probably quite small, but there is a high incidence of clinically silent emboli. An autopsy study found emboli in 30 per cent of patients after aortography, and another autopsy study found that 77 per cent of patients had histologic evidence of microembolism after aortic aneurysectomy.

The course of the renal failure varies widely. It can occur abruptly, resulting in anuria immediately after a vascular procedure. It can also occur more indolently, progressing over several months. The progression over this period can occur in "jumps"—the creatinine increases, stabilizes, then increases again. The reason for this peculiar pattern is unknown, but may be due to recurrent showers of emboli. The course also may be smoothly progressive, in which case the progression may be related to an ongoing inflammatory reaction around the affected vessels.

When this syndrome was first described, it was thought that renal failure progressing to end stage was inevitable. It also was thought the syndrome was typically fatal, so that dialysis was at times not initiated. More recently, however, a number of cases have been described with renal improvement.

McGowan, et al. (5) reported on three cases. Two of these patients suffered progressive declines in renal function over months but eventually improved. Both of these cases were caused by warfarin. Smith, et al. (6) described five cases of microembolic renal failure— in four cases recovery eventually ensued. Three of the four patients who recovered suffered emboli due to arteriography, the fourth due to warfarin.

"The percentage of cases with skin changes is unknown but is likely quite high."

From these experiences, it appears that end-stage renal disease requiring permanent dialysis is not inevitable with microembolic renal disease. It also appears that improvement can occur even after renal injury severe enough to require dialysis for several months. For this reason, a course of dialysis may be worthwhile depending on the clinical situation. It is impossible to predict from the outset who will recover. Recovery can occur with disease precipitated by arteriography or anticoagulation. When recovery occurs, renal function does not improve to the pre-embolic baseline.

Hypertension often accompanies microembolic-induced renal failure. The hypertension may be related to renin production from ischemic renal parenchyma. As with progression of the renal failure, the hypertension may occur in an episodic fashion. No study of the treatment of hypertension in this disease has been published, but an angiotensin-converting enzyme inhibitor would be a logical first step (1).

Other Areas Involved

The stomach and intestines can fall victim to microembolization, manifested by bleeding or abdominal pain. Ischemic perforation of small bowel and colon have been reported. Pancreatitis can also occur.

Myalgias are a common complaint due to muscle ischemia. The muscles of the legs are typically involved.

The retina and central venous system are relatively infrequently involved. Hollenhorst plaques, which are bright yellow cholesterol particles often found impacted at the bifurcations of retinal vessels, are helpful in diagnosis. Cerebral embolization may follow cardiac surgery, carotid angiography, carotid surgery, or may occur spontaneously. The clinical manifestations may include confusion and gradual deterioration in neurologic function.

Laboratory Findings

The diagnosis of cholesterol embolization can be difficult and, unfortunately, there is no pathognomonic finding or lab test. Perhaps the most consistent lab test in atheroembolic renal disease is eosinophilia. In those cases where an adequate white count and differential were reported, 80 per cent were found to have eosinophilia (7). Unfortunately, the eosinophilia is often transient, lasting several days. The degree of eosinophilia varies widely.

Hypocomplementemia has been reported to be a helpful finding. Cosio, et al. (8) reported nine patients with atheroembolic renal disease, seven of whom were hypocomplementemic. The C_3 was low in all seven; the C_4 low in three. In only three patients were the complement levels repeated, and were noted to have returned to normal in several days in two of these cases.

It is likely that hypocomplementemia is less frequent than suggested by Cosio. In reviewing three studies (1,5,6), in the 15 patients who had complements measured, in only two were the levels reduced. Again, when hypocomplementemia is present, it tends to be transient.

The most definitive way to make the diagnosis is by biopsy. Unfortunately, a negative biopsy may not rule out the diagnosis of microemboli because of the patchy distribution of the embolized material—especially a problem with needle biopsies. Of the tissue obtained to make a diagnosis, the most commonly obtained is from skin, muscle, gangrenous toes and kidney. More unusually, biopsies of stomach and bone marrow have provided the diagnosis. The pathognomic finding is the finding of cholesterol clefts within small vessels.

Skin biopsies are most likely to be positive when taken from involved areas and when taken as deeply as possible. Muscle biopsies should be taken from painful muscles. Renal biopsies must be interpreted with caution as needle biopsies may miss the lesion. Conversely, large biopsy specimens which reveal rare emboli must be interpreted with caution because cholesterol embolization can occur as a subclinical event.

Differential Diagnosis

There are times when the diagnosis of cholesterol embolization is clear-cut. Examples of this include patients who develop hypertension, renal failure and typical skin lesions while on warfarin or after arteriography. Another example is the patient who develops cyanotic toes with intact pedal pulses after arteriography or an anticoagulation. On many occasions, however, the diagnosis is not clear-cut, and the differential diagnosis is difficult.

Some alternative diagnoses which may provide difficulties include the following:

1. **Dye-induced Acute Tubular Necrosis.** When microemboli affect the kidneys but spare other organs, differentiating dye-induced ATN from cholesterol emboli after arteriography can be difficult. Eosinophilia or hypocomplementemia point to cholesterol embolization, but these studies need to be ordered within several days of the procedure. Negative results are not helpful. The course of dye-induced ATN tends to be stereotypical with the creatinine rising within two days of dye administration, peaking at seven to 10 days and followed by recovery. Deviation from the typical course should raise the question of cholesterol embolization.

2. **Acute (allergic) Interstitial Nephritis.** This is a form of acute renal failure usually caused by a medication, less likely by infection. It is often associated with rash, fever, myalgias and eosinophilia thereby mimicking cholesterol embolization. Eosinophiluria is usually taken as evidence of acute interstitial nephritis; however, the incidence of eosinophiluria has not been studied in atheroembolic disease. Therefore, the ability of eosinophiluria to differentiate between acute interstitial nephritis and atheroembolic disease is unknown. A biopsy may be needed to make the diagnosis.

"... it appears that end-stage renal disease requiring permanent dialysis is not inevitable with microembolic renal disease."

3. **Vasculitis.** At times the clinical picture of cholesterol embolization can suggest hypersensitivity vasculitis, polyarteritis nodosa or SLE. Hypersensitivity vasculitis can occur with acute renal failure, palpable purpura, livedo reticularis, myalgias, and fever—as can cholesterol embolization. Polyarteritis nodosa can present with subcutaneous nodules, abdominal pain, GI bleeding, hypertension and renal failure, again mimicking cholesterol embolization. Both lupus and atheroembolic disease can present with a multisystemic syndrome including acute renal failure. In cases of vasculitis where the differential is difficult, a biopsy may be required.

Treatment

A number of different treatments have been attempted including anticoagulation, replacement of diseased aortas, pentoxyphylline, and steroids. To date, no positive results have been recorded for any treatment, although there has been no systematic study.

Anticoagulation, rather than preventing further embolization, may in some cases actually exacerbate the problem, and should be avoided. Aortic surgery has been done after the initial shower of emboli to prevent recurrences. After the initial insult, however, it is impossible to predict if there will be a recurrence and, in addition, aortic surgery itself may precipitate showers of emboli. For these reasons, surgery is usually not recommended. Pentoxyphylline might be considered for painful, ischemic digits. Although there is no proven benefit with this therapy, the risk seems low.

Steroids have been used by some physicians in an attempt to inhibit the inflammatory response that may develop around the cholesterol-impacted vessels. It is thought that controlling the inflammatory process may stop the progression of renal insufficiency in some cases. However, in the scattered reports in which steroid use has been reported, no beneficial response has been noted. At this time, steroids cannot be recommended.

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1989 Van Liere Memorial Research Convocation

The 1989 Van Liere Memorial Research Convocation for students in the West Virginia University School of Medicine was held April 6. These yearly convocations enable students in the School of Medicine to present the results of their research activities in competition for the Edward J. Van Liere Award and other prizes.

The Van Liere Award, consisting of a plaque and a check for $200, was established in 1965 by the action of the faculty of the School of Medicine to recognize the research efforts of the students and to honor the late Edward J. Van Liere, M.D., Ph.D., who served as Chairman of the Department of Physiology from 1921-1955 and as Dean of the School of Medicine from 1935-1961.

The competition is organized into two categories—- the Graduate Student Research competition and the Van Liere Award competition, the latter category open only to students presenting data from research done by them as undergraduate or medical students. Seventeen students participated in the 1989 Convocation: eight in the Van Liere Award competition, and nine in the Graduate Student Research competition.

The winner of this year's Van Liere Award (the 25th) was David Jones, a fourth-year medical student. The first runner-up and winner of a check for $100 was Melissa Gamponia, a second-year medical student, and the second runner-up and winner of a check for $50 was Mark Younis, a fourth-year medical student.

The first prize in the Graduate Student Research competition, a check for $200, was awarded to Dori Thomas, Pharmacology and Toxicology; the second-place prize, a check for $100, was awarded to Xuan Liu, Biochemistry; and the third-place prize, a check for $50, was awarded to Peter Baciu, Biochemistry.

The publication of the abstracts of the winning presentations in The West Virginia Medical Journal is an important and greatly appreciated recognition of the research efforts of our students.

W. E. Gladfelter, *Chairman*
Van Liere Memorial Research Convocation Committee

Effect of $CACL_2$ in the Reperfused Isolated Working Rat Heart Using Verapamil-Based Cardioplegia

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Verapamil-based cardioplegia has been shown to better preserve high-energy phosphate stores in the ischemic myocardium, but produces myocardial depression upon reperfusion. Our study was designed to see if the addition of $CACL_2$ upon reperfusion would overcome the myocardial depressive effects while preserving myocardial energy stores.

Four groups of 10 male Sprague-Dawley rats had their hearts extirpated and placed on a modified Neely/Langerdorff apparatus where they were perfused with oxygenated Krebs-Henseliet buffer (KHB) for 20 minutes. The control group was arrested with infusion of standard K^+ cardioplegia for two and one half minutes followed by 30 minutes' ischemic arrest at 28°C.

Groups I, II and III were treated in the same manner, except cardioplegia was modified to contain verapamil (0.5 mg/L). Following ischemia, controls and group I were reperfused for 30 minutes with KHB while groups II and III had the $[Ca^{++}]$ increased in the KHB immediately upon reperfusion to 3.5 mM/L and 5.5 mM/L. All groups were reperfused at 37°C, and aortic flow (AF), heart rate (HR), and dP/dT were recorded at five-minute intervals for 30 minutes. Myocardial samples were then evaluated for ATP (μ mole/G) and creatinine phosphate (CP) (μ mole/G) content as well as for ultrastructure. Hemodynamic data are shown as per cent preischemic baseline, and were compared using Student's t-test for independent samples and reported as mean ±SEM (Table).

TABLE

	AF	HR	dP/dT	ATP	CP
CONTROL	87.63±2.15	91.62±1.25	99.42±0.41	68.59±5.74	31.94±2.53
GROUP I	52.91±4.00*	63.14±3.83*	92.23±2.02*	76.68±8.32	31.68±3.00
GROUP II	53.95±3.49*	61.90±3.47*	93.36±1.97*	73.87±4.78	23.64±2.01 **
GROUP III	70.97±3.52**	63.50±2.91*	101.73±1.66**	101.73±1.66	29.15±3.07

*denotes significant difference from control at $p<.05$
**denotes significant difference from Group I at $p<.05$

The data indicate that in hearts arrested with verapamil cardioplegia, the immediate addition of $CaCl_2$ during reperfusion augments aortic flow and dP/dT. Ultrastructurally, we see no evidence of irreversible mitochondrial damage in these hearts. There is ATP preservation and only minor depletion of CP with this treatment. We conclude that $CaCl_2$ can be used to augment myocardial function during reperfusion without negating the protective efforts of verapamil-based cardioplegia.

Immunodetection and Distribution of an Adenocarcinoma-Associated Mucin in Human Colonic Transitional Epithelium

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With the advent of hybridoma technology, monoclonal antibodies (MAB) can be used to identify and characterize tumor-associated antigens from a variety of human carcinomas. For example, the MAB B72.3, generated using human metastatic breast carcinoma, binds the mucin TAG-72, a high-molecular-weight glycoprotein. Our objective was to assess the expression and distribution of TAG-72 using the MAB B72.3 in human colonic transitional epithelium, and to compare these results to the immunoreactivity of the uninvolved and malignant epithelium. Previous work has shown that 80-90 per cent of colon carcinomas express TAG-72; however, no studies have examined TAG-72 production in transitional tissue immediately adjacent to the tumor.

Tissue samples from 21 cases of colorectal adenocarcinomas were fixed, sectioned, treated with the MAB, and then stained with the avidin-biotin-peroxidase technique. In 20 of the cases, both the cancer and transitional tissues were immunoreactive with TAG-72 localized as intracytoplasmic, vacuolar, and/or luminal staining. As a control, uninvolved tissue demonstrated the least amount of staining, appearing in the apical epithelial cells. The Table presents a quantitation of TAG-72 production and the results of a two-way analysis of variance.

TABLE

	Mean Per cent Reactive Cells	*Standard Error*	*P-Value for Each Pair*
Uninvolved	5.095	1.230	
Cancer	42.714	5.480	<0.0001
Uninvolved	5.095	1.230	
Transitional	53.905	5.715	<0.0001

A possible explanation for the immunoreactivity in the transitional epithelium is that adenocarcinomatous cells may secrete a diffusible, paracrine-like effector which induces TAG-72 production. Alternatively, the observed presence of TAG-72 in colonic transitional epithelium may represent an early change in the conversion of normal cells to neoplastic cells. Finally, it was noted that in poorly differentiated colonic adenocarcinomas the production of TAG-72 is decreased. For possible future research, the MAB B72.3 may be tested in staging colon cancer, as a prognostic indicator, or in classifying premalignant disease states.

***Note:** This abstract describes work also presented at the Federation of American Societies for Experimental Biology's 73rd Annual Meeting in New Orleans, LA, March 19-23, 1989. A manuscript for publication is also being prepared.

Blood Lipids, Body Composition and Aerobic Capacity in Weight Lifters Using or Not Using Steroids

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Steroid use in athletes has increased, but they may pose a serious health hazard to the athletes who use them. The purpose of this research was to determine if weight lifters who use steroids cancel the gains of correct weight training.

Male weight lifters were assigned by questionnaire to one of three groups: Control (n=9), recreational weight lifters who worked out <10 hrs/week; Heavy Lifters (n=10), men who trained >10 hrs/week and did not use steroids; and Steroids Users (n=7), heavy lifters who used steroids in the last six months. Subjects completed a health history, skinfold and circumference measurements, stress testing, and fasting blood lipid determination.

Height among the three groups was not different, but the Steroid group was heavier (217 lbs.) than the Heavy Lifters (180 lbs.) ($p<0.05$). Per cent of body fat was not different. The mean circumference of the neck, biceps, thigh, and chest were greater in the steroid users than the other two groups $p<0.05$). There was no difference among the groups in resting or exercise blood pressures or max VO_2/Kg. Diastolic blood pressure during recovery from exercise was lower in the Control group. HDL cholesterol was lower ($p<0.05$) in the Steroid group (16.9 mg/dl) compared to the Heavy Lifters (42.9 mg/dl) or the Control group (42.8 mg/dl). LDL cholesterol was highest ($p<0.05$) in the Steroid Users (156 mg/dl) compared to the Heavy Lifters (90.6 mg/dl). The Control group LDL-C was 106.8 mg/dl. LDL/HDL was 17.8 in the Steroid Users, 2.3 in the Heavy Lifters ($p<0.05$) and 2.5 in the Controls. Triglycerides were not different among the groups.

In summary, anabolic steroids increase bodily dimensions and weight by increasing lean weight. Lipids are affected adversely by steroid use with a marked decrease in HDL but an increase in LDL cholesterol. These lipid abnormalities are of long-term concern since they are associated with increased cardiovascular atherosclerosis.

Bioactivation as a Mechanism of Hydroquinone-Associated Stromal Cell Toxicity: Comparison of Macrophage and Fibroblastoid Cells

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Bone marrow stroma consists of two cell types, macrophages and fibroblastoid stromal cells, which regulate the growth and differentiation of myelopoietic cells via the production of growth factors. We have shown previously that macrophages are more sensitive than fibroblastoid stromal cells to the toxic effects of the benzene metabolite hydroquinone (HQ).

The goal of this study was to determine if selective bioactivation is responsible for the macrophage-selective effects of HQ. A fibroblastoid stromal cell line (LTF) was derived from long-term bone marrow cultures. Macrophages were derived from B6C3F1 mouse bone marrow over a five-day period. LTF and macrophage cultures were incubated with 10 μM ^{14}C-HQ to examine differential bioactivation.

After 24 hours, the amount of ^{14}C covalently bound to cellular macromolecules was determined. Macrophages had 16-fold higher levels of macromolecule-associated ^{14}C than did LTF cells. Additional experiments revealed that HQ bioactivation to covalent-binding species was hydrogen peroxide (H_2O_2)-dependent in macrophage homogenates incubated for 30 minutes. Covalent binding in companion LTF homogenates was minimal even in the presence of excess H_2O_2. It was postulated that a peroxidase enzyme-mediated event was responsible for the bioactivation.

The peroxidase content of macrophages and LTF cells was subsequently examined. Macrophages contained detectable peroxidase activity while LTF cells did not. Treatment with the peroxidase inhibitor azide eliminated the activity in macrophage samples. Purified myeloperoxidase (MPO)-mediated bioactivation of HQ in the presence of H_2O_2 was also examined. A time-dependent and a MPO concentration-dependent increase in the amount of ^{14}C covalently bound to ovalbumin was noted.

These data support the hypothesis that a peroxidase-mediated event is responsible for macrophage-selective toxicity of HQ.

Expression of Tyrosine Hydroxylase cDNA Clone Using *In Vitro* Transcription and Translation

XUAN LIU
Beijing, China
KENT E. VRANA

Tryosine hydroylase (TH) is the enzyme which catalyzes the rate-limiting reaction in catecholamine biosynthesis. Imbalances in catecholamine levels have been linked to a number of diseases (e.g., hypertension and Parkinsonism). Therefore, the regulation of TH is of primary importance.

In order to study the mechanisms by which TH is regulated, we wish to do structure/function studies on those amino acids involved in the regulation using a cloned gene for the enzyme. We have isolated a full-length clone for the TH gene from a cDNA library constructed from rat pheochromocytoma tissue. This TH gene has been subcloned downstream from an SP6 (bacteriophage) promoter in such a manner that transcription with SP6 polymerase yields sense (messenger) RNA. Messenger RNA, generated in this manner, can be translated in a cell-free rabbit reticulocyte extract in the test tube to produce a 60 kDa protein.

Western blot analysis indicates that this protein is recognized by TH-specific antiserum. When the *in vitro* translation mixture is subjected to sucrose density gradient centrifugation, the radiolabelled TH displays an S-value consistent with monomeric subunits (4.6 S). Low levels of TH activity have been detected in this translation extract, and the enzyme possesses a Km for tyrosine (80 μM) which is similar to the native enzyme.

Changes in Nuclear Protein Phosphorylation During Monocytic and Granulocytic Differentiation of a Human Promyelocytic Cell Line (HL-60)

P. BACIU
Morgantown, West Virginia

I am studying the mechanisms which regulate cellular differentiation by using the HL-60 cell line as a model system. My hypothesis is that changes in nuclear protein phosphorylation are responsible for the initiation of differentiation by altering gene transcription, these phosphorylation events being triggered by extrinsic signals activating protein kinases. The phosphorylation of trans-acting factors such as fos, myc, jun, SRE and CREBP has been implicated in the regulation of gene transcription, although no direct *in-vivo* causal relationship has been demonstrated.

A significant impediment to the study of nuclear protein phosphorylation has been the absence of adequate methods for the isolation, separation and identification of individual phosphoproteins. I have developed methods for both the isolation of pure nuclei (<one per cent contamination) which appear morphologically intact at the electron microscopic level, and extraction and preparation of nuclear phosphoproteins for high resolution 2D-PAGE and autoradiographic analysis. The application of these techniques to *in-vivo* ^{32}Pi labeled HL-60 cells undergoing granulocytic differentiation induced by retinoic acid or monocytic differentiation induced by Vitamin D_3 has identified differentiation-dependent changes in nuclear protein phosphorylation for both granulocytic and monocytic differentiation pathways. At least some of these changes occur in regions in which c-fos and c-jun proteins are located.

Identification of individual nuclear phosphoproteins involved in gene regulation is being done by immunoprecipitation with specific oncogene antisera. Additional DNA binding phosphoproteins will be identified using DNA affinity column chromatography and gel mobility shift assays with cAMP, PKC, Vitamin D_3, and retinoic acid-specific enhancer elements.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page. The first paragraph of the manuscript and the first paragraph under a subhead should not be indented.

Articles contained on computer diskettes are acceptable and encouraged. Please contact the *Journal* in advance to determine the format type to be used. The conventional manuscript as described above must accompany the diskette.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal*, which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*. Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus*.

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

1. Ann Intern Med 1982;96:766-71.

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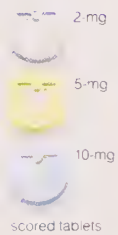

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President's Page

"Thanks to 533 members who responded to a recent questionnaire, we have learned that the average West Virginia physician provided $57,000 in uncompensated care during 1988."

Moving Ahead

My first two months in this office have been eye opening, to say the least. So far, I have visited one third of our component societies, travelling to virtually every geographic region within our state. It is clear that our physicians remain perplexed about the Omnibus Health Care Act and its present set of emergency rules, the status of the PPO (Preferred Medical Care Network) as well as the uncertain federal legislation dealing with physician payment reform.

I have probably raised more questions than I have been able to provide answers. Emotions among our members range from frustration and anger to hopeful speculation. Yes, there is also a certain amount of apathy among many who feel that either their voices still don't count or that WVSMA is not doing anything for them. Some feel that the terrible state of the West Virginia economy provides little hope for change and, therefore, there is no reason to think that things will ever get any better. In many ways, we physicians seem to mirror the communities in which we live.

I have also had the opportunity to visit with physicians in some of our neighboring states. While specific problems undoubtedly vary from one region to another, it probably comes as no surprise that physicians invariably feel the impending loss of control of their professional lives. But our colleagues outside West Virginia are working hard to combat this loss. An association many times larger than our own has overwhelmingly voted to unify its membership, which raises by several decibels the voice of organized medicine in the United States. Another has developed a model program to provide improved medical care for its under-insured state residents.

Don't think for a moment that West Virginia physicians are sitting idly, twiddling their thumbs. Several committees of the WVSMA are actively working on major projects. The Legislative Committee is finalizing our legislative package for 1990 with a special sub-commitee specifically addressing the economics of insurance vehicles throughout West Virginia in comparison to surrounding states. This study will provide strong data to support our contention that major tort reform is still needed in West Virginia.

Work is ongoing on the question of uncompensated care provided by West Virginia physicians. Thanks to 533 members who responded to a recent questionnaire, we have learned that the averge West Virginia physician provided $57,000 in uncompensated care during 1988. Results of this survey will be published as soon as it has been completely examined.

Opposition to the Omnibus Health Care Act is useless without a solid alternative solution to health care problems in our state. Considerable work is being undertaken to develop a draft of a plan to be proposed in the near future. This version will address not only mechanisms to offer cost-effective medical care, but also will offer a balance of ethical principles which must be considered in allocation of scarce resources and distribution of these resources to the ever increasing number of people who need them.

The beginnings of a medical student section in WVSMA have been established with involvement of students from both Marshall University and West Virginia University schools of medicine. Reorganization of WVSMA staff will focus on intensified government relations and communications.

As we approach the upcoming holiday season, let me ask each of you to spend an extra moment each week reflecting on what you have done that week to contribute to your profession's image within your community. And then take another moment—perhaps a longer one—to spend some extra time with your family. They deserve it and you need it!

—Derrick L. Latos, M.D.

Getting Smart

Doctors are finally getting politically smart. They are starting to contribute money in significant amounts to political campaigns.

The reluctance of doctors to contribute money to political causes has been for generations a subject of wonder and a matter of frustration to political fund raisers. Doctors are a pushover for charitable causes. Generous to a fault. Easy marks for tear-jerking story tellers.

But with politics it has been different. It has been as though doctors expected their political advice and opinions to be accepted and valued with regard similar to that accorded their medical advice and prescriptions. Are we not paid for our advice? Why should we put out money to accompany our sage counsel?

The problem is that sage as it might have been, our political advice was not often accepted, or even heard. Others with advice less worthy, and perhaps with motives less pure, assured a hearing for their advice via contributing while our words faded into dim mumbling in the background.

There is really nothing dishonest about the political process. With some notable exceptions, politicians are not dishonest charlatans selling their vote to the highest bidder. But, like young girls at a formal, they will dance with those who brought them...and usually go home with them too.

We do have good advice to give, and not just on topics in medicine. We need to assure that that advice is heard where it counts.

We are one month away from the beginning of another election year. Political candidates are astir in the hustings. A political campaign is an expensive undertaking. They need money to attract voters. It is a wise investment on our part to ease that need with candidates of our choice at all levels of government. Beyond contributing, doctors need to take whatever active role is asked of them in actual political campaigns.

If we do not assure an audience for our political advice, we are simply muttering into the wind.—SDW

Hopeless Cases

Guidelines for the management of hopelessly ill patients have been issued by a few New England hospitals. Reports indicate that while these guidelines stop short of an outright approval of euthanasia, they set forth conditions wherein doctors may withdraw life-support systems.

To get right to the point, this is a mistake. It is a mistake because the guidelines make it unmistakably clear that a doctor should be the one who performs the final, and fatal, deed.

We do not dispute the fine logic and humanistic reasoning used to arrive at the justification for ending a life of raging pain or one with no meaning. We violently dispute the need to involve a doctor in the final act of ending that, or any, life.

Doctors are healers and savers of life. We are educated and trained to do this. We spend years of effort improving our skills and techniques to heal and to save life. Our patients know us and trust us as healers. How far can they trust us when they suspect we are part-time executioners? What training is needed to pull a plug? To kill?

Killing is certainly what is being authorized. How many physicians could be found to perform the final act if, in its wisdom, the board of trustees of a hospital decreed that when all the proper criteria are met, a .45 caliber automatic held just above the right ear and fired at a corresponding spot just above the left ear should be the proper and approved method of terminating a life? The result is the same as that accomplished by pulling a plug. Only quicker. And more humane, avoiding, as it would, any terminal suffering or ugly display such as gagging or retching, convulsing or gasping for air, or any other manifestation af an ill-thought urge to cling to life.

The decision to end a life is not in the province of Medicine. There is no justification for such a decision within the sphere of medical ethics. Doctors simply lack the competence for such a decision.

Traditionally, decisions in regard to the ending of life have been made by the judiciary. Executioners have been employed to carry out such court orders. The role of the doctor has been to confirm that the dictate of the court has been accomplished.

That's the way it should be. If there are to be executions, humanistic or otherwise, let them hire executioners. Let no one assume this is fit work for doctors.—SDW

Note: Our above editorial appeared in the October, 1976, issue of the *Journal*. We thought our readers might like to share, from time to time, earlier editorials addressing issues which are remarkably similar to the ones continuing to confront Medicine today.—*Ed.*

Our Readers Speak

A Tale of Two Cities

The Vol. 84, No. 9 (Sept., 1988) issue of the *West Virginia Medical Journal* described the salutary effect of environmental lithium on mortality from major cardiovascular disease; this letter briefly discusses this finding, extends on to the salutary effect of environmental lithium on prophylaxis of mental hospital admissions, and introduces the topic of water fluoride in alleviating fetal death.

The data are presented from the standpoint of two cities, one in the northwestern part of the state while the other is in the northeastern; its validity from the standpoint of two-by-two contingency table analysis is introductory. The Table gives the data from these two cities.

TABLE
Morbidity/Mortality

	Li mg/L	*Flouride mg/L*	*Major Cardiac* Mort. (PMR)	*Fetal* Mort. Rate
City 1 NW	0.03	1.25	1.24	7.5
City 2 NE	0.10	0.88	0.24	15.6
Mental Hosp. Adm. Rate, Proportion of 100,000 County Population				
City 1 NW	313			
City 2 NE	91			

The Pearson's probability statistic for the salutary effect of lithium on prophylaxing mental hospital admissions is 0.0000 for such an event occurring by chance alone; the same value and conclusion hold true for the effect of fluoride in apparently reducing the fetal mortality rate. The effect of lithium on the proportionate mortality rate from cardiovascular diseases for these two cities, however, is 0.53, indicating chance operates alone between them. It also indicates the fallibility of comparison of sites alone, although the results can give rise to possible relationships between two factors in spite of those confounding ones. Further work is needed to investigate these findings.

John H. McWhorter M.D.
McWhorter, WV 26401

Thanks

To: Officers and Members of the West Virginia State Medical Association

From: Mary W. Hamilton

This is just a note to let you know how very much I appreciate the beautiful plaque and resolution which were presented to me during the 1989 Annual Meeting at the Greenbrier. I certainly was both surprised and pleased to learn that, in addition, my husband, Keith, and I were given the option of selecting a trip to be taken at Association expense. We're working on that and will let the officers know what choice we've made.

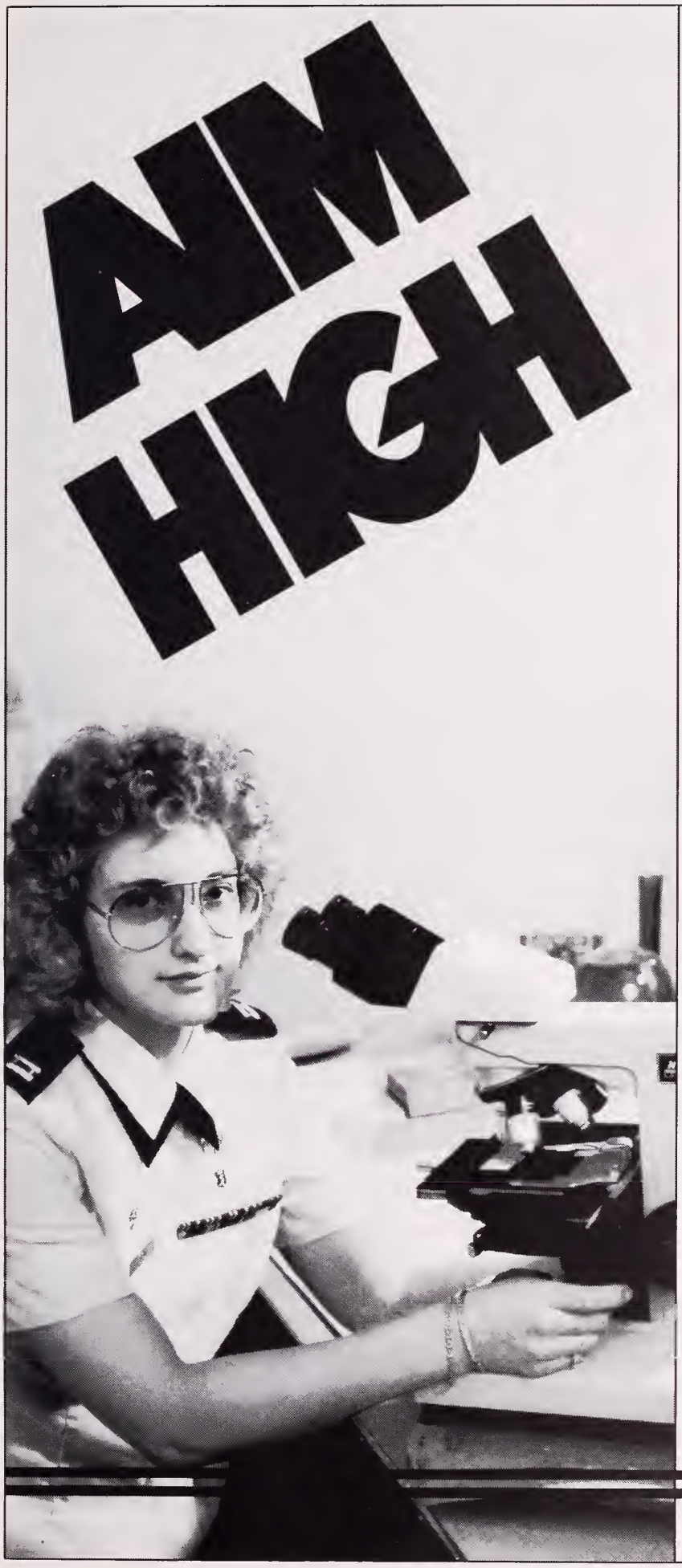
You know, as I sit here at the computer in the Association offices today, I look back over the past 35 years with both sadness and happiness—thankfully, a great deal more happiness than sadness. I think of the many wonderful people I've known and worked with through the years—both the "execs" who gave me daily directions in the office and their "bosses," the Association presidents and officers who had the real work to do. I've known and worked with some unique people. There are several particular ones who come to mind, and they were very special. They and their families grew to mean so much to me through the years. West Virginia has been, and is, very fortunate in having such loving, caring Doctors of Medicine.

I'm looking forward to retirement with anticipation. Hopefully, now Keith and I can actually do some of the things we've always wanted to do but couldn't because of our jobs—such as travel.

As you might guess, I could become terribly sentimental about this thing. However, I don't intend to. I'll simply say that the WVSMA has always played such an important role in my life that those whom I have known and loved through the years will not easily be forgotten.

Thanks again for your love and kindness these past 35 years. Our son, Larry, and his family join Keith and me in wishing for each of you nothing but the very best always.

Editor's Note: Mrs. Hamilton, former WVSMA Executive Assistant, retired September 30. See story in the October *Journal*.



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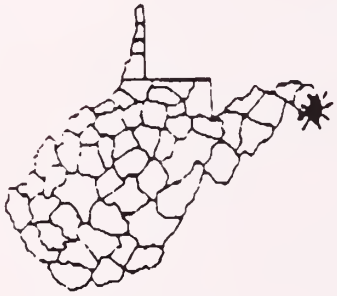

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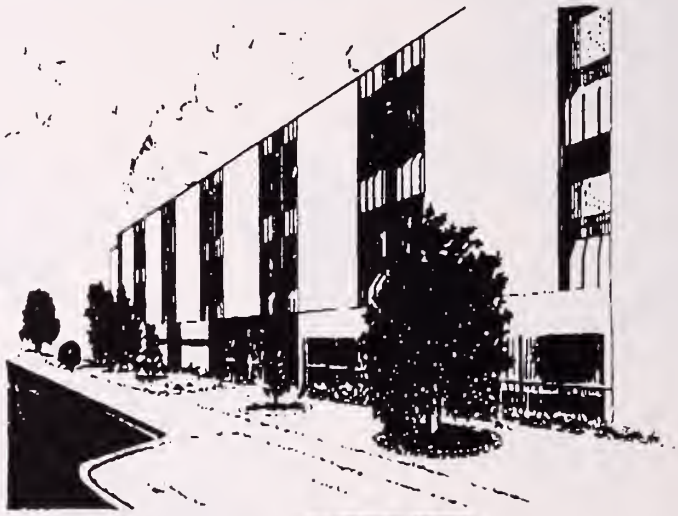

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January 'Mid-Winter Clinical Conference' Program Complete

Hershman

Mufson

The program for the 1990 Mid-Winter Clinical Conference is virtually complete as additional speakers were confirmed in November by the Program Committee.

The 23rd conference, a weekend CME event, will be held January 26-28 in Charleston at the Holiday Inn Charleston House. It will begin Friday afternoon, January 26, and continue through Sunday morning until noon.

The program is sponsored by WVSMA, with Marshall University and West Virginia University schools of medicine as co-sponsors.

The Friday afternoon session will cover "Adolescent Health;" Saturday morning, "Potpourri of Topics;" Saturday afternoon, "Immunology Update," and Sunday morning, "Aging Process."

New speakers and topics being announced are:

"Eating Disorders," Richard J. Seime, Ph.D., Morgantown, and "Substance Abuse in the Adolescent," Antoinette Hershman, M.D., Morgantown, Friday afternoon;

"Ultrasound: Why Ask For It?", Deborah Willard, M.D., Morgantown, and "Mammography—Where We Are—Where Are We Going?," Gary M. Tolley, M.D., Huntington, Saturday morning;

"Update on Immunizations for the Adult," Maurice A. Mufson, M.D., Huntington; "Update in Allergen Immunotherapy," L. Blair Thrush, M.D., Charleston; "Tips in Selecting the Right NSAID, and What to do After You Pick It," James E. Brick, M.D., Morgantown, and "Arthritis Update," Paul D. Saville, M.D., Charleston, Saturday afternoon;

"Polypharmacy in the Aged Population," Mona Counts, R.N., Ph.D., Morgantown; "Nutrition," Nancy Rodriguez, R.D., Ph.D., Morgantown, and "Falls in the Elderly," Robert Walker, M.D., Huntington, Sunday morning.

The traditional Friday evening Physicians' Session will be on "Quality Assurance for Physicians—Practice Guidelines" while "Toxics in Your Environment" will be the topic for the concurrent Public Session.

The Speakers

Doctor Hershman is Coordinator for Combined Child Psychiatry Fellowship programs, Chestnut Ridge Hospital, Morgantown, and Charleston Area Medical Center; and Assistant Professor of Psychiatry, WVU Hospitals.

She also is Consulting Psychiatrist for institutions and programs in Pennsylvania and the Summit Center for Human Development in Clarksburg.

Born in Philadelphia, Doctor Hershman earned B.A. and M.A. degrees in psychology from Temple University, and earned her M.D. degree in 1979 from the Medical College of Pennsylvania. She received her postgraduate training at the Institute of Pennsylvania Hospital, Philadelphia; Medical College of Pennsylvania, and WVU where she was a Fellow in Child and Adolescent Psychology.

Doctor Hershman received the Child and Adolescent Service Systems Program Award of the American Academy of Child and Adolescent Psychiatry, sponsored by the National Institute of Mental Health, in 1988.

Doctor Willard has been on the WVU faculty since 1982, and now is Associate Professor and Interim Chairman of the Department of Radiology. She also is Director of the Ultrasound Laboratory and the Ultrasonography Training Program.

A native of Charleston, she was graduated from West Virginia Wesleyan College, received her M.D. degree in 1978 from WVU, and completed a diagnostic radiology residency at WVU.

Doctor Willard has made numerous presentations on ultrasound, and organized "Diagnostic Ultrasound Update" CME programs in Morgantown in 1985-88.

She serves on the Medical School Admissions Committee, is faculty advisor for senior medical students, and is a member of the Faculty Senate.

Doctor Tolley is Acting Chairman of the Department of Radiology and Clinical Professor of Radiology at MU.

He is Chief of Radiology at Cabell Huntington Hospital where

Brick

Counts

he was President of the staff in 1987-88.

Doctor Tolley was graduated from MU, received his M.D. degree in 1961 from the Medical College of Virginia, and interned at Charleston Memorial Hospital. He completed his radiology residency at Indiana University. He was President of the Cabell County Medical Society in 1987.

Doctor Mufson, a member of the Conference Program Committee, has been Professor and Chairman of the Department of Medicine at MU since 1976, and Professor of Microbiology since 1980.

Doctor Mufson has lectured extensively in this country and abroad and, from July, 1984 to April, 1985, took sabbatical leave as Visiting Scientist in the Department of Virology, Karolinska Institute, Stockholm, Sweden, with Dr. Erling Noorby.

He was named MU Scholar, and was a recipient of the MU Meet-the-Scholar Award. The American College of Physicans awarded him the A. Blaine Brower Traveling Scholarship in 1987-88.

Doctor Mufson, a past President of the Cabell County Medical Society, has been Chairman or member of the WVSMA Annual Meeting Program Committee four times.

Born in New York City, he was graduated from Bucknell University, and received his M.D. degree in 1957 from New York University. He completed his postgraduate work at Bellevue Hospital in New York City, Cook County Hospital, Chicago, and the National Institutes of Health where he was a Fellow in Infectious Diseases.

Doctor Mufson is a member of the editorial boards of Journal of Clinical Microbiology and American Journal of The Medical Sciences. He is the author or co-author of 136 articles and 39 abstracts.

Doctor Brick, who has been on the WVU faculty since 1981, is Associate Professor of Medicine, Section of Rheumatology. He is WVU representative to the American Federation for Clinical Research, and was Visiting Professor, Department of Medicine/Rheumatology, University of Virginia, in 1986.

He is a member of the Board of Directors of the WVU Medical Corporation.

Doctor Brick completed both his undergraduate and graduate work at WVU, receiving his M.D. degree in 1977 and finishing a fellowship in rheumatology in 1981. He also was a fellow in immunology and rheumatology at the University of Missouri in 1982-84, and was recipient of the American Rheumatism Association Fellow Award, 1983, Central Regional Meeting.

Doctor Counts is Professor in the WVU School of Nursing and Clinical Coordinator of the Geriatric Progam; and Adjunct Associate Professor, WVU School of Medicine.

She came to WVU in 1981 after serving as Associate Professor, Department of Nursing, George Mason University. Prior to that, she held a variety of nursing-teaching posts in Florida, Georgia, Kansas, Texas, and with Department of Defense Schools in West Germany.

Doctor Counts earned her B.S. degree from the University of Florida, M.S. from Emory University, and Ph.D. from University of Texas at Austin. She is an Associate of the WVU Gerontology Center.

At WVU, she is Geriatric Program Clinical Team Leader, Chair of the Graduate Curriculum Committee, and a member of the University Senate.

She is a member of the Editorial Board of Advances in Nursing Science.

Other Information

For a complete list of topics, speakers, registration information and form, see Page 553. For information about speakers and topics previously announced, see October-November issues of the *Journal.*

Other Meetings With Conference

Other meetings, etc. are scheduled in conjunction with the 1990 WVSMA Mid-Winter Clinical Conference to be held in Charleston, January 26-28, at the Holiday Inn Charleston House (see Conference story in this issue of the Journal).

Thursday, Jan. 25

5 P.M.—Registration/Reception, American College of Physicians. William O. McMillan, Jr., M.D., Governor.

6 P.M.—Legislative Reception, WVSMA members and state legislators.

7 P.M.—Break-out Scientific Sessions, West Virginia Chapter, American College of Surgeons.

(Time to be announced)—WVSMA Executive Committee, Derrick L. Latos, M.D., presiding.

Friday, Jan. 26

8 A.M.—American College of Physicians General Session, William O. McMillan, Jr., M.D., presiding.

11 A.M.—Luncheon, Component Society Presidents and Executive Secretaries, Derrick L. Latos, M.D., Wheeling, WVSMA President, presiding.

1 P.M.—Luncheon Meeting, Young Physicians, David W. Avery, M.D., President, presiding. Guest speaker: Keith Burdette, President, West Virginia State Senate.

5 P.M.—West Virginia University Alumni-sponsored Dinner/Buffet.

Saturday, Jan. 27

12 Noon—Council Luncheon, West Virginia Chapter, American College of Physicians, William O. McMillan, Jr., M.D., Governor, presiding.

12 Noon—Luncheon Meeting, West Virginia Psychiatry Section, Paul Clausell, M.D., President, presiding.

12 Noon—Luncheon Meeting, West Virginia Academy of Ophthalmology, Michael A. Fiery, M.D., presiding.

1 P.M.—Legislative Update, Derrick L. Latos, M.D., presiding.

Sunday, Jan. 28

7:30 A.M.—Breakfast Meeting, WVSMA Cancer Committee, Catalino B. Mendoza, Jr., M.D., Chairman, presiding.

12 Noon—Luncheon Meeting, WVSMA Council, Bill M. Atkinson, M.D., Chairman, presiding.

State Physician SMA President

Larry C. Smith, M.D.

Larry C. Smith, M.D., of Huntington was installed as President of the Southern Medical Association in November during the Association's 83rd annual scientific assembly in Washington, DC.

A member of the SMA since 1968, Doctor Smith has served as Associate Councilor and Councilor from West Virginia, member of the Executive Committee of the Council, Vice Chairman and Chairman of the Council, Vice President, and President Elect.

Born in Charlottesville, Virginia, Doctor Smith received his A.B. degree from Bridgewater College in Virginia, B.S. and M.S. degrees from West Virginia University, and his M.D. degree from the Medical College of Virginia. After an internship at the former Charleston Memorial Hospital, he served for two years as a flight surgeon in the U. S. Air Force. He then practiced medicine in Ceredo-Kenova for a number of years, after which he served a residency in psychiatry at Bowman Gray School of Medicine.

He currently is in the private practice of psychiatry, and also serves as a psychiatry consultant for the Huntington Veterans Administration Medical Center.

Doctor Smith has been a member of the American Psychiatric Association (APA) since 1968. He has served as both Secretary and Legislative Representative of the West Virginia District Branch of APA, and recently completed his term as its President (1987-89).

The SMA represents more than 60,000 practicing physicians in 16 states and the District of Columbia. More than 3,000 physicians of all specialties gathered in Washington for the scientific assembly last month.

WVSMA President Derrick L. Latos, M.D., left, was the featured speaker for the induction ball program of the Philippine Medical Association of West Virginia this fall in Charleston at the Marriott. Rano S. Bofill, M.D., Man, right, is 1989-90 President. The induction ball capped off two days of activity including a CME program, talent show and sports competition. It was the first official appearance for Doctor Latos, who was installed in August at the WVSMA Annual Meeting.

New Class Enters WVU Medical School

West Virginia University's School of Medicine has 88 first-year students this fall, including 54 men and 34 women. There are 71 West Virginians in the class, representing 23 counties.

Twenty-nine of the class members graduated from WVU. Other state colleges with alumni in the class include: Marshall University, Alderson-Broaddus College, West Liberty State College, Bethany College, West Virginia Wesleyan College, Wheeling Jesuit College, West Virginia Institute of Technology, Fairmont State College and Concord College.

Other states represented among first-year students are Pennsylvania, Ohio, Maryland, New York and Tennessee.

Members of the class and the schools they attended include:

Berkeley: Martinsburg—Myrna Lynne Carpenter, WVU;

Cabell: Huntington—Lisa M. Breeding, Alderson-Broaddus College; Nabajyoti Bora, MU; John F. Mega, MU; Ona— Kim Marie Stooke, MU;

Fayette: Fayetteville—Wilson Cook, WVU;

Greenbrier: Clintonsville—Benjamin S. Crandall, Boston University; White Sulphur Springs—M. Suzanne Collins, Virginia Technical College;

Hancock: Weirton—Amandeep Purewal, Washington and Jefferson College; Franklin D. Shuler, Bethany College;

Harrison: Clarksburg—Robert J. Beto, West Virginia Wesleyan College; Lost Creek—Stephenie Kennedy, Wheeling Jesuit College;

Jefferson: Kearneysville—Kenneth F. Hardy, WVU;

Kanawha: Charleston—Michael A. Covelli, Youngstown State University; Gary Manning Frazier, Virginia Polytechnic Institute; Emily D. Hamrick, University of Richmond; John G. Harkins, University of North Carolina; Katherine Kauh, Duke University; Daniel Lee Stickler, University of Pittsburgh; Geeta R. Verma, Wellesley College; Cross

(continued on page 557)

'Toxics in Your Environment'

Help Needed to Promote Public Program

"Toxics in Your Environment" will be the focus of the Public Session for the 1990 Mid-Winter Clinical Conference Friday, January 26, at the Holiday Inn Charleston House (see Conference story in this issue of the *Journal).*

The 7 P.M. panel discussion, held concurrently with the Physicians' Session, will be moderated by Gregory R. Wagner, M.D., Director of Respiratory Disease Studies, National Institute of Occupational Safety and Health, Morgantown.

Panelists will be Gregory Wedin, Ph.D., Director, West Virginia Poison Center, and Assistant Professor, West Virginia University School of Pharmacy, Charleston;

Donald Rosenberg, M.D., Medical Director, Kanawha/Charleston Department of Health, Charleston;

Carl G. Beard II, former Director, Pollution Control Commission, Charleston.

WVSMA officers and members are being asked by the Program Committee to make patients and other lay persons with whom they come in contact aware of the public program, and encourage their attendance. Both personal contacts and local notices to the public by component societies through the media and other means are suggested.

Dr. Bryant Heads National Society

James L. Bryant, M.D.

James L. Bryant, M.D., of Clarksburg, a WVSMA Councilor, became President of the American Academy of Otolaryngic Allergy at its annual meeting in New Orleans.

The Academy (AAOA) represents the practice of allergy by otolaryngologists in the United States, Canada and other nations.

Doctor Bryant, formerly of Chelyan and Belle, is a graduate of West Virginia University School of Medicine, and was a resident at Northwestern University Medical School in Chicago following active duty as a flight surgeon in the USAF.

Doctor Bryant is a founder of Ear, Nose and Throat Associates of Clarksburg where he has practiced since 1973. He is on the active medical staff at United Hospital Center where he has twice been President of the medical staff. He is a past President of the Harrison County Medical Society, and is a Clinical Professor at WVU School of Medicine.

Doctor Bryant founded the West Virginia Academy of Otolaryngology-Head and Neck Surgery, has served as its President and Secretary-Treasurer, and now is a Director.

On a national level, Doctor Bryant is a member of the Board of Governors of the American Academy of Otolaryngology-Head and Neck Surgery, and is Chairman of a regional committee for the American College of Surgeons.

As AAOA President, Doctor Bryant will be involved with overseeing and coordinating its educational, research and socioeconomic functions as well as advising the administrative staff in Washington, DC. No West Virginia physician has ever been elected to this office before.

Dr. Turner Laureate Award Recipient

Charles E. Turner, M.D.

Charles E. Turner, M.D., of Huntington, WVSMA President in 1986-87, was presented the Laureate Award of the West Virginia Chapter of the American College of Physicians (ACP). The award was given to Doctor Turner, internist and Clinical Professor of Medicine at Marshall University School of Medicine, at the ACP regional meeting in Pittsburgh.

The award cited Doctor Turner's contributions in medical education, organized medicine, patient care and civil responsibilities.

Doctor Turner, a Huntington native, was graduated from MU, and earned his M.D. degree from West Virginia University. He received postgraduate training in internal medicine and gastroenterology at the University of Rochester's Strong Memorial Hospital.

He was a founding member of the Huntington Internal Medicine Group, and is active in many medical organizations.

Doctor Turner, an ACP Fellow since 1975, also is a Fellow of the American College of Gastroenterology and a member of the American Federation of Clinical Research, American Gastroenterological Association, and the American Society for Gastroenterology Endoscopy.

Laureate Awards honor ACP Fellows or Masters who have demonstrated a commitment of excellence in medical care, education or research, and in service to their community and ACP.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1989 and 1990. The programs were compiled by Ernest W. Chick, M.D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; Judith A. Bradle, Program Manager, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Bradle, (304) 347-1363; and Hall, (304) 348-9580.

CAMC/WVU-Charleston Division

Feb. 4-7, Ninth Annual Mid-Winter Cardiovascular Symposium, Snowshoe Ski Resort

Feb. 10-11, Gastroenterology Update 1990, Canaan Valley Resort

CME Outreach Programs

Key to Sponsors

★ WVU Health Sciences Center, Morgantown

☐ WVU Health Sciences Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Cabin Creek, ☐ Cabin Creek Medical Center, 8:30 A.M.—Dec. (vacation)

Gassaway, ☐ Braxton County Memorial Hospital, 6:30 P.M.—Dec. (vacation)

Hurricane, • Putnam General Hospital, 7 P.M.—Dec. 21, Diabetic Retinopathy, Mark Hatfield, M.D.

Logan, • Logan General Hospital, 11:30 A.M.—Dec. 1, Pediatric Emergencies, James Waldeck, M.D.

Madison, ☐ Boone Memorial Hospital, 6:30 P.M.—Dec. (vacation)

Man, • Appalachian Regional Hospital, 7 P.M.—Dec. 19, Update on Cardiac Electrophysiology, Ron McCowan, M.D.

Montgomery, • General Hospital, 12 P.M.—Dec. 6, Pediatric Emergencies, James Waldeck, M.D.

Oak Hill, ☐ Plateau Medical Center, 7:30 P.M.—Dec. (vacation)

Parkersburg, ★ Camden-Clark Hospital, 7 A.M.—Dec. 13, New Antibiotics, Knox Van Dyke, Ph.D. Dec. 20, Insulin Therapy, Charlotte Nath

Ripley, • Jackson General Hospital, 12:30 P.M.—Dec. 15, Current Management of the Cardiac Bypass Patient, Steve Lewis, M.D.

Ronceverte, • Humana Hospital Greenbrier Valley, 1 P.M.—Dec. 20 (tba)

Spencer, • Roane General Hospital, 12:30 P.M.—Dec 19, Growth & Growth Disorders, Fereydoun Zangeneh, M.D.

Summersville, ☐ Summersville Memorial Hospital, 6 P.M.—Dec. 5, Pediatric Emergencies, J. Michael Waldeck, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Jan. 23, Stress Management, John Vanin, M.D.

Wheeling, ★ Ohio Valley Medical Center, 8 A.M.—Jan. 24, Surgery Topic, Gordon Murray, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Dec. (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic, 4 P.M.—Dec. (vacation)

Williamson, ☐ Williamson Memorial Hospital, 6:30 P.M.—Dec. (vacation)

"I NO LONGER BELIEVE IN MYSELF."

23rd Mid-Winter Clinical Conference

WEST VIRGINIA STATE MEDICAL ASSOCIATION

Holiday Inn Charleston House, Charleston, WV

January 26-28, 1990

Program Outline

FRIDAY, JANUARY 26--Adolescent Health--2 to 5 P.M.

"CVD Risk Factors of the Adolescent"--Michael J. Lewis, M.D., Morgantown; "Eating Disorders"--Richard J. Seime, Ph.D., Morgantown; "Substance Abuse in the Adolescent"--Antoinette Hershman, M.D., Morgantown; and "Adolescent Pregnancy in West Virginia"--Nancy Tolliver, R.N., M.S., Charleston

SATURDAY, JANUARY 27--"Potpourri" of Topics--9 A.M. to Noon

"New or Contemporary Treatment of Congestive Heart Failure"--Robert C. Touchon, M.D., Huntington; "Lasers in Medicine, An Overview"--Tara C. Sharma, M.D., Huntington; "Ultrasound: Why Ask For It?"--Deborah Willard, M.D., Morgantown; "Mammography--Where We Are--Where Are We Going?"--Gary M. Tolley, M.D., Huntington; and "Health Effects of Low Level Asbestos Exposure"--Daniel E. Banks, M.D., Morgantown

SATURDAY, JANUARY 27--Immunology Update--2 to 5:15 P.M.

"Immunizations: Childhood--Update on Immunizations, Especially Measles"--James E. McJunkin, M.D., Charleston, and "Update on Immunizations for the Adult"--Maurice A. Mufson, M.D., Huntington; "Update in Allergen Immunotherapy"--L. Blair Thrush, M.D., Charleston; "Tips in Selecting the Right NSAID, and What to do After You Pick It"--James E. Brick, M.D., Morgantown; and "Arthritis Update"--Paul D. Saville, M.D., Charleston

SUNDAY, JANUARY 28--Aging Process--9 A.M. to Noon

"The Normal Physiology of Aging"--Morton Bogdonoff, M.D., New York, N.Y.; "Polypharmacy in the Aged Population"--Mona Counts, R.N., Ph.D., Morgantown; "Nutrition"--Nancy Rodriguez, R.D., Ph.D., Morgantown; and "Falls in the Elderly"--Robert Walker, M.D., Huntington

OVERNIGHT ACCOMMODATIONS--Physicians should communicate directly with the Holiday Inn Charleston House. Attendees will be given a special room rate of $61 (single or double). When making reservations please specify that you're attending the WVSMA Conference.

ADVANCE REGISTRATION

Please register me for the 23rd Mid-Winter Clinical Conference January 26-28, 1990, at the Charleston House Holiday Inn, Charleston.

Conference Registration Fee. ..... $ _____

($75 WVSMA Member/$150 Non-Member)*

Please make check payable to WVSMA, and mail to P.O. Box 4106, Charleston, WV 25364

NAME _____ SPECIALTY _____

ADDRESS _____

*There is no registration fee for residents, medical students and nurses.

Poetry Corner

Advent

Carols for the shut-ins,
Chrismons on the tree;
Surrounded by our Christian friends,
What joy for you and me.

Our happiness we should share
With everyone this season,
For a Babe beyond compare
Born for a special reason:
That we could come to know our God,
And praise His holy name.
Though sinful through this world we trod,
He loves us just the same.

God incarnate, Jesus grew,
And shouldered all our sin,
So when our mortal life is through,
Heaven's gate we'll enter in.

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

As Old as You Feel

Can rising suns and changing moons the matter of age decree?
Or summers warming after winters cooling a liar make of me?

The calendar says seventy but you feel like forty.
Then away with the calendar you say.
Your hair may be graying and your face wrinkled,
Accept what you see friends appeal.
You need not believe it or even conceive it,
You're only as old as you feel.

Now it could be forty and feel like seventy,
There are some among us you shout.
But as long as you look up at some well filled stocking.
There's hope for you old timers no doubt.
Now old age will come but you need not beckon.
Nor give it encouragement—still
It's nice to be seventy and feel like forty and
Find young things still give you a thrill.
Go on with your living, young man
You ain't nearly over the hill.

J. Paul Aliff, M.D.
Scott Depot

Medical Meetings

December

3-6—AMA Interim Meeting, Honolulu.

1990

January

11-13—Southern Section, Am. Laryngological, Rhinological & Otological Society, Inc., White Sulphur Springs.

25-28—Neurosurgical Society of the Virginias, Hot Springs, Va.

26-28—WVSMA 23rd Mid-Winter Clinical Conference, Charleston.

28-31—Southeastern Surgical Conference, Naples, Fla.

February

8-13—Am. Academy of Orthopaedic Surgeons, New Orleans.

14-18—Am. College of Psychiatrists, Palm Springs, Calif.

24—Am. College of Utilization Review Physicians, Atlanta.

March

4-8—Am. Institute of Ultrasound in Medicine, New Orleans.

18-22—Am. College of Cardiology, New Orleans.

23-25—WV Urological Society annual spring seminar, Charleston.

23-28—Am. Academy of Allergy & Immunology, Baltimore.

April

1-5—Am. Assoc. of Pathologists, Washington, D.C.

22-25—WV Academy of Ophthalmology national spring meeting, White Sulphur Springs.

26-29—Am. College of Mohs Micrographic Surgery,Chicago.

26-29—Am. College of Physicians, Chicago.

29-May 4—Am. Society of Colon & Rectal Surgeons, St. Louis, MO.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Annual Urological Seminar in March

The annual spring seminar of the West Virginia Urological Society will be held March 23-25, 1990, at the Charleston Marriott.

The theme will be "Female Urology," with emphasis on office evaluation and medical and surgical treatment of urinary incontinence. It will be of interest to all urologists and gynecologists and to nurses and paraprofessionals in both fields.

For more information contact Douglas E. McKinney, M.D., 11 Chenoweth Drive, Bridgeport, WV 26330.

Are You Only Smiling For The Camera?

Or do you know someone who is?

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Radford, Virginia

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Anesthesiology	Orthopedic Surgery
General Surgery	Colon-Rectal Surgery
Thoracic Surgery	Vascular Surgery
Pediatric Surgery	Neurosurgery

A test program is being conducted from August 1, 1989 through September 30, 1990, which offers a bonus to eligible physicians who reside in certain geographic areas (Pennsylvania, West Virginia, Ohio, Michigan, Illinois, Indiana, Wisconsin, Minnesota and Iowa). You would receive a $10,000 bonus for each year you serve as an Army Reserve physician—for a maximum of three years.

You may serve near your home, at times convenient for you, or at Army medical facilities in the United States and abroad. There are also opportunities to attend conferences and participate in special training programs, such as the Advanced Trauma Life Support Course.

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NEW WVU CLASS
(continued from page 550)

Lanes — John Justice, MU; Steven R. Toney, WVU; Roy R. Wolfe, West Virginia Wesleyan College; Rand — Julia Lynn Ewen, West Virginia Institute of Technology; South Charleston—Catalina G. Delgra, WVU; Michael H. Richardson, WVU;

Lewis: Weston—Eduardo L. Jimenez, WVU;

Logan: Logan—John C. Haddox, WVU; Marie M. Vickers, MU;

Marion: Fairmont—John Kevin Koch, Fairmont State College;

Mercer: Princeton—Robin L. Fanning, Concord College;

Mineral: Fort Ashby—Elizabeth S. Powers, WVU; Keyser — Douglas N. Shaffer, WVU;

Monongalia: Morgantown—Kristine Ann Burns, WVU; Najma N. Dalal, Bryn Mawr College; Jeffrey S. Delo, WVU; Daniel Collins Dorsey, WVU; Charles D. Francis, University of Notre Dame; Michael A. Lewine, Harvard University; C.J. Malanga, Swarthmore College; Julia E. Martin, Fairmont State College; Christopher T. Miller, WVU; Charles J. Mullett, Duke University; Charles Judson Reamy, WVU; Timothy Roach, WVU; Anthony A. Saweikis, WVU; Teresa A. Stafford, WVU; Peter D. Wearden, Georgetown University; Lucia C. Whong, Illinois State University;

Nicholas: Summersville—Jeffrey A. Lawson, WVU;

Ohio: Wheeling—Anita Guerriero, West Liberty State College; Abraham J. Liebeskind, WVU; Jose Pangilinan, WVU; Kavitha G. Reddy, WVU; Patrick R. Yassini, WVU;

Pleasants: St.Marys—John A. McKnight, West Virginia Wesleyan College;

Putnam: Scott Depot—Sharon D. Londeree, West Virginia Wesleyan College; Poca — Jill L. McClanahan, MU;

Raleigh: Beckley—Samuel E. Brown, Virginia Polytechnic Institute; Bryan K. Richmond, MU; Andrew J. Maiolo, WVU; Patrick G. Oyco, WVU; Daniels — Ely J. Salon, WVU;

Randolph: Elkins — David J. Currence, West Virginia Wesleyan College; Shyama Masilamani, Hollins College;

Roane: Spencer—Edgar C. Gamponia, Davidson College;

Upshur: Buckhannon—Thomas Grove, West Virginia Wesleyan;

Wood: Parkersburg—Jeffrey M. Lockhart, WVU; Jeffrey L. Hung, Duke University; Steve Paul Hopkins, WVU;

Out-Of-State: *Maryland,* Camp Springs—JoAnne K. Hodges, Wellesley College; Grantsville—Scott V. Watkins, Western Maryland College; *New York,* Massapequa Park—Janet Widerspan, University of California at Berkeley; *Ohio,* Poland—Annette C. Kulifay, Youngstown State University; *Pennsylvania,* Altoona—David A. Ricche, University of Pittsburgh; Edinboro—Michael R. Trotta, WVU; Indiana—Lisa Ray, Indiana University of Pennsylvania; Lineville—Orton C. Armstrong, Alderson-Broaddus College. Monessen—Jennifer Vivio, St. Vincent College; Pittsburgh—Daniel P. Lapp, University of Pittsburgh; Janet S. Vose, Alderson-Broaddus College; Point Marion—Valerie Ann Simkovich, Penn State University; Trafford—Wade R. Porterfield, University of Pittsburgh; Robert F. Keating, Jr., St. Vincent College; Uniontown—Jamie L. Hughes, Penn State University; Verona — John R. Rocchi, St. Vincent College; *Tennessee,* Nashville—Lorie Ann Hollister, David Lipscombe College.

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Pediatrics:
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James A. Arnett, M. D.

Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA. Health Sciences Center News

Health Providers Getting AIDS Facts

WVU School of Medicine has received funding to continue the work of the West Virginia Center for AIDS Education and Training, one of several regional AIDS centers funded by the U.S. Department of Health and Human Services.

The West Virginia center is part of the Mid-Atlantic AIDS Regional Education and Training Center (MAARETC), which is developing educational and training programs in Delaware, Maryland, Virginia, West Virginia and the District of Columbia.

The continuation grant will be used to disseminate current and accurate information about AIDS and HIV infection to West Virginia health professionals, according to Rashida Khakoo, M.D., principal investigator and infectious disease specialist at WVU.

By the end of the program's first year, more than 1,000 West Virginia Health professionals had received grant-supported AIDS education.

Managing HIV Infection

MAARETC objectives include helping health care providers recognize, diagnose, and manage the entire spectrum of HIV infection. It provides in-depth training for those already providing care for infected patients, and recruits and trains health care providers to serve as trainers for other health professionals throughout the region.

Besides teaching how to treat and prevent AIDS, the MAARETC program is committed to helping health care providers in various disciplines deal with their own reactions to the disease. This includes introducing them to the function of support groups; stress reduction mechanisms; burn-out prevention approaches; and areas of interpersonal behavior including human sexuality.

"Fortunately, a great deal of AIDS education is already under way in West Virginia, and the State Medical Association has made the disease a top priority," Doctor Khakoo said. "We have supported those efforts while simultaneously assessing need and providing education."

Results from a needs assessment survey conducted last November were mailed in July to health care professionals around the state. Survey respondents were comprised of employees in eight types of health care organizations in West Virginia. Results indicate that information about the legal aspects of AIDS is the greatest educational need, followed closely by information about the administrative and ethical aspects of treating the disease.

Information Provided

In addition to health professionals, the West Virginia Center for AIDS Education and Training provides information to communities and interested groups through public speakers, articles and brochures. It also maintains lists of organizations, groups, facilities, and professionals who are willing to work with and care for HIV-positive patients.

For more information about the West Virginia Center for AIDS Education and Training, contact Cathi Boegehold, nurse coordinator, at (304) 293-3307.

Members of the statewide MAARETC Advisory Board include:

Lynn Alexander, Education Coordinator, American Red Cross, Huntington; Roger Banks, Program Coordinator, Mountain State AIDS Network, Morgantown; Mona Blackwell, R.N., Director of Nursing, Mercer County Health Department, Bluefield;

Carolyn A. Clarke, PAC, Education Coordinator, Shenandoah Community Health Center, Martinsburg; Sharon Hall, Director of Continuing Education, Charleston Area Medical Center, Charleston; Sue Carpenter, Medical Social Worker, Morgantown Hospice, Morgantown;

Bill Martin, Anatomy Program, West Virginia School of Osteopathic Medicine, Lewisburg; W. R. McCutcheon, D.D.S., Associate Dean, School of Dentistry, WVU Health Sciences Center, Morgantown; Cynthia Rinaldi, AIDS Prevention Program, West Virginia Department of Health, South Charleston; and Mukund K. Shah, M.D., Parkersburg.

Are Space-Injured Slower to Heal?

When people working in space stations injure their muscles, will they heal more slowly than they would on earth?

At WVU Health Sciences Center, physiologist William Stauber is working to answer this question. His research, funded by the National Aeronautics and Space Administration, is part of a cooperative United States-Soviet Union effort to study whether muscles will heal differently in zero gravity.

"The Soviets are sharing the muscle tissue of rats that orbited the Earth in a Soviet satellite for several days," Doctor Stauber said.

Soviet scientists bruised a section of the rats' muscle tissue before sending them into orbit. The bruising is similar to injuries that occur in sports or at the workplace.

At a lab set up at the satellite's landing site, the injured muscle tissue was removed and frozen, then sent on to Moscow and the United State.

"We are looking at whether connective tissues are laid down in the proper orientation for optimal healing. If there is fibrosis, it would lead to dysfunction and scarring," Doctor Stauber said.

United States experiments in space have focused on how humans adapt physically and mentally to prolonged exposure to weightlessness. Only limited animal research has been completed on shuttle flights.

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MU School Of Medicine News

MU MARSHALL UNIVERSITY

'Commitment' Cited

Full Accreditation Given MU

MU School of Medicine has received full accreditation for the maximum seven-year period from the Liaison Committee on Medical Education.

The report singled out the commitment of student and faculty members as major factors in the School's success. "Overall, the survey team was impressed with the enthusiasm the student body showed for the program and the performance of the students as indicated by Board scores and their ability to match the residencies of their choosing," the report said. "It seems the School is meeting its mission of educating young people from Appalachia who are strongly committed to serving people of their region with both exellence and compassion."

MU President Dale F. Nitzchke said the strong accreditation results reflect positively on Marshall's affiliated hospitals. "We could not be where we are today without a strong, supportive medical community," he said. "Our students derive enormous benefits from the experience they receive through the VA Medical Center, St. Mary's Hospital, Cabell Huntington Hospital, River Park Hospital and Huntington State Hospital."

Strengths

Strengths cited by the LCME in its report included:

- the collective commitment to give rural West Virginia students the opportunity to address the region's health-care needs;
- the students' and faculty's "enthusiastic and exceptional cohesive commitment" to the school's mission;
- continued strong community support for the school;
- continued strong support of the U.S. Department of Veterans Affairs through the Huntington VA Medical Center;
- good clinical resources; and
- the joint endeavors of the medical school and community hospitals.

The report described School of Medicine Dean Charles H. McKown, Jr., M.D., as uniquely qualified to lead the school at this time, and praised the recent selection of two department chairmen, Drs. Berel Held and Joseph Werthammer.

Dean McKown said he, too, was pleased by the report. "We couldn't help but be delighted," he said.

"The survey team scrutinized us with great thoroughness, and we think it's a measure of our success that what they saw most clearly were the things we consider most important: the medical school's unique rural mission, its highly talented and committed faculty, strong support from the University and the community at large, and its truly remarkable students.

"It all adds up to an outstanding educational experience with a very distinct flavor of what the future holds for medical education."

Compiled from material furnished by the Office of University Relations, Marshall University.

MU photo by Rick Haye

From the School of Medicine's Academic Computing Department at the Coon Medical Education Building, Governor Gaston Caperton watches as a computer link-up allows a rural clinic—in this case, the Lincoln Primary Care Center—to tie into Marshall's computer system. Governor Caperton was at MU to participate in the announcement of a Huntington Foundation grant to purchase equipment to extend the school's state-of-the-art computer network. The system will help bring the physician in the field into total contact with the resources available to physicians in medical centers. With the Governor are, from lower center, student assistant Lisa Felix, medical student Paul Grandinetti, Health Science Libraries Director Ed Dzierzak, and Academic Computing Chairman Jan I. Fox.

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Annual Audit, 1988

The annual audit of receipts and disbursements of West Virginia State Medical Association for the calendar year 1988 has been completed by the firm of Ernst & Whinney, Certified Public Accountants of Charleston. The complete audit, with accountants' report, follows:

REPORT OF INDEPENDENT AUDITORS

To the Council
West Virginia State Medical Association
Charleston, West Virginia

We have audited the accompanying balance sheet of West Virginia State Medical Association as of December 31, 1988, and the related statements of revenues and expenses—unrestricted fund, changes in fund balances, and cash flows—unrestricted fund for the year then ended. These financial statements are the responsibility of the Association's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of West Virginia State Medical Association at December 31, 1988, and the results of its operations and its cash flows for the year then ended in conformity with generally accepted accounting principles.

As more fully described in Note E to the financial statements, the United States Tax Court ruled that losses arising in current and prior years from advertising activities do not constitute net operating losses available for deduction from other unrelated business taxable income. The Association is currently challenging this ruling through the appropriate appeals process. The ultimate outcome of this matter cannot be determined at the present time. Accordingly, no provision for any liability that may result has been included in the accompanying financial statements.

Charleston, West Virginia
March 20, 1989, except with respect to the matter discussed in Note E, as to which the date is August 23, 1989

BALANCE SHEET
WEST VIRGINIA STATE MEDICAL ASSOCIATION
December 31, 1988

UNRESTRICTED FUND

ASSETS	
Cash and cash equivalents	$663,520
Investments (cost $200,035)	184,187
Note receivable—Note C	14,368
Accounts receivable	7,654
Interest receivable	6,241
Prepaid expenses—Note C	24,844
Furniture and equipment (net of accumulated depreciation of $110,195)	78,589
	$979,403
LIABILITIES	
State and American Medical Association dues collected in advance	$180,900
Medical scholarship obligations—Note A	35,113
Accounts payable	13,561
Accrued expenses and other liabilities	42,423
	271,997
FUND BALANCES	
Undesignated	710,859
Designated for professional liability education—Note A	12,395
Unrealized depreciation on equity securities	(15,848)
	707,406
CONTINGENT INCOME TAX LIABILITY—Note E	
	$979,403

RESTRICTED FUND

ASSET	
Investment in common stock	$4,250
FUND BALANCE	
Endowment	$4,250

See auditors' report and notes to financial statements.

STATEMENT OF REVENUES AND EXPENSES—UNRESTRICTED FUND
WEST VIRGINIA STATE MEDICAL ASSOCIATION
Year Ended December 31, 1988

REVENUES	
Dues	$ 584,170
Professional liability services—Note D	143,300
Interest and investments	58,242
Advertising	47,210
Exhibit space income	31,690
Refund of expenses	23,464
Registration fee income	19,320
Contributions	19,280
IC Systems commission income	15,548
Other revenues, including grants from Endowment Fund of $1,312	33,343
	975,567
EXPENSES	
Salaries and wages	224,655
Publishing and printing	120,897
Convention speakers and supplies	91,244
Travel	76,476
Office rent	72,000
Malpractice (Tort Reform)	56,182
Employee benefits	54,966
Advances—Note C	50,000
Legal and accounting	45,868
Depreciation expense	37,532
Postage	21,447
Payroll taxes	15,528
Computer repairs and maintenance	13,721
Consultant retainer	13,510
Telephone	11,532
President's stipend	10,000
Liability insurance	9,239
Property taxes	9,127
Office supplies	8,778
Medical students/residents' subsidiaries	8,223
Public relations	6,531
Utilities	6,136
Other expenses	40,728
	1,004,320
EXCESS OF EXPENSES OVER REVENUES	$ (28,753)

See auditors' report and notes to financial statements.

STATEMENT OF CHANGES IN FUND BALANCES
WEST VIRGINIA STATE MEDICAL ASSOCIATION
Year Ended December 31, 1988

	Unrestricted Fund	Restricted Fund Endowment Fund
Balance at December 31, 1987, as previously reported	$738,089	$4,250
Effect of restatement described in Note B	(1,235)	
Balance at December 31, 1987, as restated	736,854	4,250
Excess of expenses over revenues	(28,753)	
Increase in unrealized (loss) on equity securities—Note A	(695)	
Dividends received		1,312
Grant to unrestricted fund		(1,312)
Balance at December 31, 1988	$707,406	$4,250

See auditors' report and notes to financial statements.

STATEMENT OF CASH FLOWS—UNRESTRICTED FUND
WEST VIRGINIA STATE MEDICAL ASSOCIATION
Year Ended December 31, 1988

OPERATING ACTIVITIES	
Net (loss)	$(28,753)
Adjustments to reconcile net (loss) to net cash provided by operating activities:	
Depreciation	37,532
Decrease in accounts receivable	43,543
Decrease in interest receivable	931
Decrease in prepaid expenses	2,605
Increase in State and American Medical Association dues collected in advance	83,821
Decrease in medical scholarship obligations	(39,614)
Increase in accounts payable	133
Decrease in accrued expenses and other liabilities	(6,203)
NET CASH PROVIDED BY OPERATING ACTIVITIES	93,995
INVESTING ACTIVITIES	
Purchases of furniture and equipment	(8,073)
NET CASH USED IN INVESTING ACTIVITIES	(8,073)
INCREASE IN CASH	85,922
Cash and cash equivalents at beginning of year	577,598
CASH AND CASH EQUIVALENTS AT END OF YEAR	$663,520

See auditors' report and notes to financial statements.

NOTES TO FINANCIAL STATEMENTS
WEST VIRGINIA STATE MEDICAL ASSOCIATION
December 31, 1988

NOTE A—SIGNIFICANT ACCOUNTING POLICIES

Cash and Cash Equivalents: Cash and cash equivalents are comprised of highly liquid short-term investments carried at cost, which approximates market.

Investments: Investments in equity securities are stated at the lower of cost or market value. There were no realized gains or losses on the sale of investments in 1988. Unrealized gains and losses on equity securities are credited or charged directly to fund balance. The gross unrealized loss on equity securities at December 31, 1988, was $15,848. Net unrealized securities gains and losses through March 20, 1989, were not material.

Furniture and Equipment: Office furnishings and equipment are recorded at historical cost and are being depreciated over their estimated useful lives on a straight-line basis.

Medical Scholarship Obligations: West Virginia State Medical Association (the Association) provides scholarships to students attending Schools of Medicine at West Virginia and Marshall Universities for the purpose of defraying expenses incurred by such students. Under certain conditions, as set forth in the scholarship agreements, the scholarships are repayable to the Association in whole or in part. Scholarships to students and repayments thereof are recorded directly in the Medical Scholarship Fund. This fund was dissolved in 1987, and a liability for the remaining scholarship obligations has been established as part of the general fund.

Restricted Fund Balance: The Association has designated a special assessment fund to be used for professional liability education. The funds are to be used to inform physicians about current and potential problems with malpractice insurance and are accounted for in the unrestricted fund.

Dues: Membership dues are recognized as revenue in the applicable membership period.

NOTE B—RESTATEMENT OF BEGINNING OF THE YEAR FUND BALANCE

During 1988, the Association changed from the modified cash to the accrual basis of accounting to conform with generally accepted accounting principles. As a result, the December 31, 1987, unrestricted fund balance of $738,089 as previously reported has been reduced by $1,235 to $736,854 to reflect the net effect of the change in accounting.

NOTE C—RELATED PARTY TRANSACTIONS

West Virginia State Medical Association Properties, Inc. (Properties) was formed during 1980 to acquire land and construct an office building for the Association. This project was completed during 1985. In conjunction with this activity, the Association collected assessments on behalf of Properties and also loaned Properties $25,000 in 1981 from the General Fund. During 1986, the Board approved the termination of the building assessment fund. The balance of the fund of $10,632 was applied as a payment against the note receivable leaving a balance due of $14,368.

In 1984, the Association advanced Properties $20,000 from the general fund which was considered prepayment of future rents. This amount is included in prepaid expenses in the financial statements.

In February 1989, Properties merged with the Association. At that time, Properties ceased to exist as a separate entity and its assets, liabilities, and fund balance were assumed by the Association.

In 1986, the Association approved a $50,000 line of credit to Preferred Medical Care Network of West Virginia, Inc. (PMCN), a preferred provider organization established to benefit Association members. This line of credit was fully drawn down by PMCN to assist with initial start-up costs. PMCN is currently in poor financial condition and management has determined that PMCN will probably not be able to repay the amount advanced to them. Accordingly, the $50,000 advanced to PMCN has been reflected as an expense in 1988. In April 1989, the Association approved a $25,000 additional line of credit to PMCN. At the present time, no monies have been advanced under the additional line.

NOTE D—PROFESSIONAL LIABILITY SERVICES

The Association has separate agreements with Continental Insurance Agency (CNA) and McDonough Caperton Insurance Group, L.P. (MCIG) to provide educational and marketing services to the Association members relating to professional liability insurance. Under the terms of the agreement, the Association is to receive up to $100,000 a year from each company. The Association recognized income of $100,000 from CNA and $43,300 from MCIG in 1988.

NOTE E—CONTINGENT INCOME TAX LIABILITY

Revenues of the Association are generally exempt from federal income tax under Section 501(c)(6) of the Internal Revenue Code. However, certain income, primarily advertising revenues and income received under agreements with insurance providers for their educational and marketing services and use of the Association's membership lists, is considered unrelated business income and is taxable to the extent it exceeds allocable expenses.

In 1988, the United States Tax Court, and in 1989, the 4th Circuit Court of Appeals held that the Association's losses arising in current and prior years from advertising activities do not constitute net operating losses available for deduction from other unrelated business income. The Association intends to appeal the 4th Circuit's decision to the U.S. Supreme Court. The ultimate outcome of this matter cannot be determined at the present time. Accordingly, no provision for any liability that may ultimately result has been included in the financial statements. If the Association is not successful in its appeal, the federal and state tax liabilities, including interest, would approximate $151,000 as of December 31, 1988.

NOTE F—RETIREMENT PLAN

The Association is a participant in the Prototype Corporate Defined Contribution Retirement Plan of One Valley Bank (the Plan). All employees of the Association are covered by the Plan as long as they are at least twenty-one years old and have completed six months of service. The Association's contribution for the current Plan year was $25,829 based on 10% of the total compensation of all eligible participants. Employees are vested in their participant account at the rate of 20% for each completed year of service up to 100% vesting after five years of service.

Dr. Nicholas G. Evans, Assistant Dean, Undergraduate Education, and two West Virginia University honor students.

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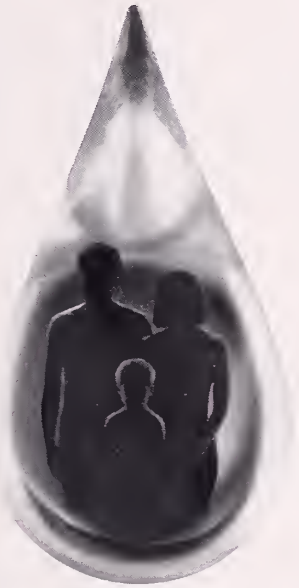

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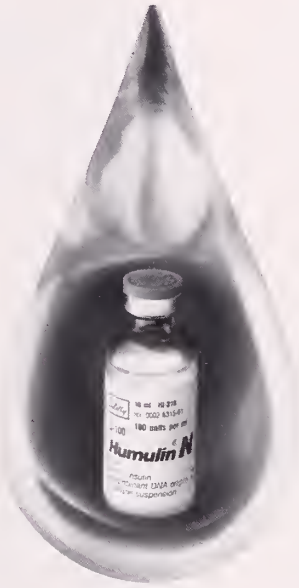

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*Makar, Jasbir S.
*Singh, Sarjit

Harrison

*Bryant, James L.
*Chang, Tong H.
*Christiansen, Carroll
**Crossen, John J.
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*De La Pena, Erlinda L.
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*Gyimesi, Ference C.
Hess, Robert D.
**Kalaycioglu, Mehmet V.
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Lopez, Florencia C.
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Minardi, Lawrence M.
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Wright, Kenneth C.
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Logan

Bellam, Rajendra P.
*Fortner, Harry D.
Kitiphongspattana, Kriengkrai
Padmanaban, Ramanathan
Rao, Bopanna P.
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Marion

Bell, John T.
Cadogan, Eusebio
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Roidad, Mohammed
Smith, Mary J.

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Allen, Kenneth J.
**Anwar, Mohammad
**French, Frank S.
Ho, Jesus T.
Lasure, Rex
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Mason

Sol, Benjamin J.
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None

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Ahmed, Nasim
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*Edwards, T. Keith
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Park, Thomas J.
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None

Monongalia

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King, Roger E.
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*Morgan, David Z.
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Powell, Stephen R.
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Snider Jr., George E.
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*Caveney, Robert A.
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Lewine, Robert A.
*Marquart, Christopher
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Noble, William L.
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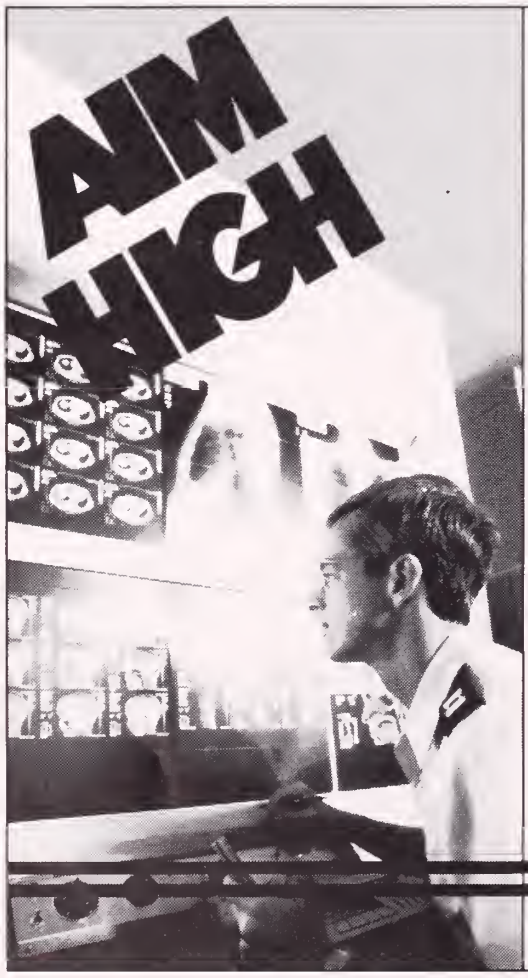

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VASOTEC®

(ENALAPRIL MALEATE | MSD)

VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema:* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General: Impaired Renal Function:* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions*.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ^{14}C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (79%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest; myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); cardiac arrest, pulmonary embolism and infarction; rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia; an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance >30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤30 mL/min (serum creatinine ≥3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, *Drug Interactions*.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, *Pharmacodynamics and Clinical Effects*.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium <130 mEq/L) or with serum creatinine >1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, *Heart Failure*, WARNINGS, and PRECAUTIONS, *Drug Interactions*.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486.

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